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ORIGINAL ARTICLES.

SOME NOTES ON MEDICAL DIAGNOSIS.[1]

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AMONG Montaigne's pithy observations upon the function and work of the physician this passage occurs: The physician "hath neede of many parts, divers considerations, and severall circumstances to proportion his desseigne justly. . . God knowes how hard the knowledge of most of these parts is!"

Sorrowfully acquiescing in the general truth of the concluding sentiment, the practitioner of to-day may yet claim that since this critic's time, some progress has been made in solving the grievous problem of diagnosis. And I have thought that it would not be uninteresting to consider, in a very general way (1) with what spirit that problem should be met, and (2) what practical methods, and (3) what logical principles should be employed in its solution. The extent of the subject and the shortness of our time make it needless to add that the discussion will be fragmentary—a mere outline.

In respect of the spirit with which the medical adviser should come to the bed-side it appears idle to counsel freedom from prejudice. Yet prejudice is a snare which lies privily in wait for even the most experienced. Particularly in family practice, where we have known a patient for years and are in our own opinion perfectly acquainted with his constitutional vagaries, it seems a work of stupid supererogation to go over his organs afresh each time we are sent for. Yet I know of no other way in which to avoid grave error. The one hundredth attack of convulsions may prove to be uremic, even though the previous ninety and nine were certainly hysterical. The three patients first taken ill in the house may have had influenza, and yet the fourth with similar onset a few days later of fever and bronchitis may develop measles. The wise man will therefore come with an unbiased mind to the consideration of his cases and take each purely on its merits.

Disposing thus briefly of the first point, which is evident enough, we may at once take up the consideration of *methods*. This includes (1) the employment of instrumental and chemical aids, (2) and the general mode of procedure at the bed-side. This division is not a strict one, but it will serve our purpose and facilitate discussion.

Instruments of precision in diagnosis have become so valuable in recent times that no one can dispense with the commoner ones; and where the facts to be ascertained are of vital importance, no one *ought* to dispense with the rarer ones as well. The rhinoscope, laryngeal mirror, ear speculum, and ophthalmoscope ought to be familiarly in the hands of every general practitioner. A little serious determination to master them is promptly successful. Any physician should be able to see for himself whether aphonia is due to catarrh, tumor, or paralysis; or whether approaching blindness is consequent upon "choked disc" or albuminuric retinitis.

As to the stethoscope (into the numberless modifications of which there is no time to enter) there will of course be no dispute. But even here there are good and bad patterns; and the bad kinds predominate, with ill-fitting ear-pieces, tubes of capillary bore, and stenoses and dilatations enough to arrest more than half the vibrations of an ordinary cardiac murmur before it reaches the ear. Incidentally it may be observed that (with normal ears) any stethoscope through which a watch cannot be easily heard ten inches from the bell is a bad stethoscope.

The phonendoscope likewise deserves more attention than it has received. While doubtless a specialist's instrument it will well repay all the time the general physician can give it—and that not only in auscultation, but also in the modified method it allows of auscultatory percussion, commonly called "stroking." I have heard many physicians condemn the phonendoscope, who, when asked what success they had had with "stroking," answered with wide open eyes, that they had never heard of it. Some of the prejudice against the instrument may be due to the imperfect imitations of the original with which the market in the United States was glutted some years ago. A good imported instrument can always be had from the American agent in Philadelphia.

The alleged "trouble" in learning how to use it is not a legitimate argument for the man who wishes to be of the greatest possible use to his patients. It is not to be expected that one should, with the inventors, become skilful enough to stroke out the normal outlines of the middle lobe of the right lung. But for feeble sounds, such as the beginning pericardial rub, or the bronchial note over a feebly breathing solid lung, it will be found of great service. And for sensitive chest walls, in women or children, stroking can often be used without the patient's even suspecting what the doctor is doing.

At the same time no stethoscope of any kind should be used often enough to dull the sensitiveness of the bare ear on the bare chest; and

[1] Read before the Jenkins Medical Society of Yonkers and Mount Vernon, Dec. 13, 1900.

most observant physicians find out for themselves that the unassisted ear (perhaps from the help given by the cranial bones) will often reveal more of the internal condition of the thorax than the best stethoscope.

In respect of instruments of percussion, the pleximeter is not so popular here as abroad. The truth as to its value probably lies between the extremes of exclusive adoption and exclusive rejection. By means of the pleximeter one can map out the various areas of normal and pathological thoracic dulness with much more accuracy and detail than with the fingers. By using a small thin elastic plate of hard rubber one can percuss even over sunken supraclavicular spaces with entire ease. One should, however, train his unassisted fingers with equal care.

It would take us too far afield to do more than mention the sphygmomanometer and the sphygmograph. Both have ardent defenders. Without wishing to deprecate their employment, or to deny that they may in future be applied more practically than at present, it may be said that they have not thus far proved clinically so valuable as they are scientifically interesting.

With the microscope, however, no practising physician can be too familiar. Urinary sediments and sputum examinations of course every one does, but it is very little harder to diagnose one's own diphtheria cultures, make the search for malarial parasites, count the leucocytes in a case of suspected leucemia or leucocytosis, or look for the gonococcus. The diagnosis of tumors requires the additional equipment of a microtome, but if one can possibly find time for the work, he will be richly repaid and may be able unexpectedly to make more than one priceless contribution to pathology. The Widal test probably involves more technical experience than any but a laboratory man can usually command. There are, however, numberless places these days where a Widal test can be promptly done for a small fee; and a slide with a dry drop of blood is all that needs to be sent.

A student of mine recently said, when I proposed to teach him how to examine blood for the plasmodium malariæ, "Oh, I don't care whether I learn that or not; I can always find somebody to do it for me!" I do not, however, conceive that we should do as *little* scientific work as we can, but as *much*.

Furthermore, the chemical examination of urine, cystic fluid, and stomach contents is left to the laboratories oftener than is needful, I think. The quantitative test for uric acid by Hopkins' method is something that any fairly well taught practitioner can do at home with a comparatively small chemical equipment. To diagnose "uric acid diathesis" without it, is mere self-stultification. To know how to determine, if nothing more, the presence or absence of free HCl in the stomach after a test meal is a great gain.

The Medical Director of an Insurance Company in New York tells of an amusing examination for insurance sent in by a provincial physician. In the blank lines for urinary analysis the medical man had written: "This urine throws down with *Fowler's solution* a cloud which I guess is sugar. I suggest that the urine be examined by a specialist." Over which we laugh. Yet many of us are sending to the specialists tests which after a little study are not a whit more difficult than the test for sugar in urine.

The question may be impatiently asked, Where is the time for all this? And, I concede, there are many physicians of unusual intellectual capacity who are weighed down by the responsibilities of a large practice; with whom lack of time is apparently a hopeless barrier. Yet we can point to brilliant examples—the first Austin Flint, Theodore Billroth, William Osler, Hilton Fagge, and a noble army of others—who did not and would not allow the exactions of practice to divert their minds from medicine on its scientific side. It is such men as these who have left their impress upon the science and the art of medicine for all time.

The second division in our discussion is, How shall we proceed at the bed-side?

To say that the successful practitioner is the methodical man seems another platitude. But, unlike the poet, the medical man is not "born," he is "made"; and it is only by patient continuance in methodical well-doing that he will ever work out his ultimate professional salvation. There is no royal road to diagnosis. The short cuts of the "snap" diagnostician, though, when successful, they may convert the unthinking, cannot but make the judicious grieve. The "Visiting" to one of the Children's hospitals in New York not long since heard a baby cough in the corner of the ward. To the wonder and admiration of the House Staff he called, "Bring that child here. It has a retropharyngeal abscess!" And on examination so it had. But we one and all know how rarely such work as this is safe. Patients often suffer with several diseases at once; even if one be externally manifest, there may be another, which it will perhaps tax our utmost capacity to discover. The solemn words addressed to his graduating class by a teacher of medicine known and admired by many of those here to-night are in point: "Gentlemen, you will make mistakes, of course; but your errors will arise far less often because you did not know than because you did not *take the trouble* to give your patients a faithful examination."

As to schemes of examination, they are numerous. Every writer of a text-book on Diagnosis thinks he must invent a new one. Most of them are reasonably good, the one essential being thoroughness. The practitioner should adopt or invent for himself one that is exhaustive, and then carefully habituate himself to it; for, as a wist moralist has remarked, we are safe in the possession of no virtue until its practice has become habitual.

The family and personal history of the patient should, of course, be elicited in minute detail. This is ordinarily, like the giving of ether, a task

left to the Junior in the Hospital. It ought not to be, for the value of the testimony so given may be critical at some crossing of the ways later on, and to estimate the veracity and intelligence of the patient or the patient's friends requires tact and experience. However, supposing it done as well as may be, we come to the *status præsens*.

The first general inspection should cover the scalp, face, trunk and extremities. The posture of the patient should be noted, the state of his nutrition, and the character of his breathing. Is he cyanosed, icteric, pallid, or flushed? Is he cachectic? Has he any local or general eruptions or scars? Are there any petechiæ on the arms or legs or trunk? He should be turned over and the back examined in the same way. Has he any dilated capillaries on the cheeks, nose or ears? Is there any dropsy? A practised eye will take in all these points one by one faster than they can be called over. We may note next the temperature and the rate of pulse and respiration, and observe the numerical ratios of the three to one another. When examining the radial pulse we should observe at the same time whether there is clubbing or cyanosis of the fingers, or any evidence of congenital deformity. A supernuferary digit may give the needed key to an anomalous cardiac condition, proving the latter to be a congenital malformation, it may be, rather an acquired lesion. Symmetrical onychia tells a solemn story; and, if it occurred acutely in childhood, the patient may be carrying the gnarled and twisted nails with him fifteen years later. One should not be content with counting the pulse and testing the regularity and tension, but should note if it have any of the "water-hammer" character, if it be dicrotic or sclerotic, if it be of the same size as and synchronous with the other radial artery, and if the carotids have a like character of pulsation. We thus rule out chances of deception from anatomical anomaly, and may get a valuable hint of aneurism. The epitrochlear and axillary lymph-nodes should be noticed on the way up the arm, then those on the neck and the groin. And this is the best time to test the deep and cutaneous nerve-reflexes.

Coming to the head, a rigid examination of all its features will be fruitful of information in a dozen ways. One thing often forgotten is observation of the so-called "signs of degeneracy." A good deal of nonsense has been published upon this subject in medical and scientific journals. Prof. Lombroso's results have been successfully questioned (see Ribot's Psychology of the Emotions) by numerous observers. All that concerns us in diagnosis is not, Are the features of the face degenerate or atavistic, but simply, are they ill-formed? Flat, projecting ears with adherent lobes, a prominent ("prognathous") jaw, an acute facial angle, thick lips, defects of the special senses—these things mean for the practical diagnostician that some of the viscera are likely to share in the malformation or at least to possess a lessened resisting power. A few slightly suspicious signs of tuberculous deposit in the apex of one lung appreciate in gravity if the external evidences of degeneracy are marked. Any one who works in a dispensary among tenement people may observe this over and over again.

The significance of sudden falling out of the hair is familiar. In babies the size of the fontanelles and degree of ossification should be observed. Next, the sense-organs should be taken up in order. The ear-drums should be examined with a speculum. If the patient's mind is clouded, or, if he is a child and has an acute pharyngitis, or adenoids, or any of the acute infectious diseases, the examination should be frequently repeated. A timely paracentesis will save the child's hearing in many cases where we now wait until the mother calls our attention to an otorrhea, and then find that occluded pus has damaged the sound-conducting media beyond remedy. German statistics some years ago showed that over 5 per cent. of all cases of acquired deafness in Germany were due to neglected ear-disease in the scarlatina of infancy.

The manifold relations of ocular disease to general pathology are well known. We should at least note whether there is exophthalmos, what is the size of the pupils, their reaction to light, the transparency of the cornea, and the movements of the muscles of the bulb. The ophthalmoscope and a lamp or candle will readily show what the condition of the retina and refractive media is; and the bright white perimacular spots of albuminuric retinitis, the pulsating central artery of aortic regurgitation, the choked disc of cerebral tumor, the presence of tubercles in the choroid—may throw a flood of light on a dark diagnosis. The nose, tongue and pharynx are rarely neglected by any one, but it should not be forgotten that marked syphilitic scars can sometimes be made out only with the laryngoscope. If hoarseness exist or any disorders be complained of which are referable to the larynx, it should be examined without fail.

After glancing at the thyroid and looking for pulsating areas in the neck we may go on to the chest. Of mensuration and succussion nothing need be said. As to inspection, as far as I have observed the work of physicians, it is unfortunately rather neglected. The osseous thorax should be first considered, the curves of the column, the outline and position of each of the spinous processes, the symmetry of the ribs, the presence of a "rosary," the "set" of the scapulæ on the back, the stooping of the shoulders, the depth, width and anterior-posterior diameter of the thorax, the relative size and prominence of the clavicles. Regarding these last it has been my experience that the right clavicle is generally thicker and more curved than the left. If this inequality be exaggerated, it will seriously dull percussion resonance over the right apex—especially in front. When the patient takes a deep breath, asthma and emphysema will often be disclosed in a moment by the slow expiratory collapse of the lung like a punctured balloon, by the fixation of the ribs in inspiration, the "barrel-thorax," and the tense-

ness of the sterno-mastoid and other accessory breathing muscles. If we are fortunate enough to make out the occasional line of dilated capillaries around the insertion of the diaphragm, we shall be perfectly secure in the same diagnosis without going a step farther. Kyphosis of the spine and rachitic angles in the ribs will often make a nearly flat percussion note even over normal lungs. These conditions should be all noticed carefully before percussion is begun. Litten's diaphragm phenomenon is often of value. A good light and an intelligent patient are the only prerequisites.

The state of the superficial veins of the thorax is something of which very little is said in the text-books. Chronic dry pleurisy with or without disease of the lung, if at all extensive, is apt to bring them into marked prominence. Locally dilated veins also result from chronic valvular disease, and adhesive pericarditis. In congenital pulmonary lesions I have found the surface veins just above the base of the heart often remarkably enlarged. A tumor of the pleura or mediastinum would probably have the same effect. The other visible signs of the circulatory function are equally important. Not only the apex-beat of the heart is often observable, but in mitral and pulmonary disease the action of the hypertrophied right ventricle can be often noticed in the 3d and 4th left spaces close to the sternum. The wavy impulse of dilation is familiar. The pulsating areas caused by aneurism are to be carefully sought for in front and all the way to the lumbar vertebræ behind. The intercostal spaces can be often counted with the eye, and the joint of the manubrium with the gladiolus made out without touching the chest with the fingers. The agitation made by a pulsating pleurisy may be visible. In deep breathing the meaning of entire absence of movement on one side or of a retracted apex needs no comment. The latter sign is often almost pathognomonic of tuberculosis.

Passing on to palpation there are many things too familiar to permit of notice. Palpation should be always done with one hand at a time. Vocal fremitus is far from the only kind one can feel, though there is only time to speak of pleuritic friction fremitus which is often present in dry pleurisy, and is easily made out with the tips of the fingers.

I have studied with unusual care the normal *degree of difference* between the vocal fremitus of the right and left lungs, and have been astonished, as time has passed on, to see how large the excess of vibration on the right side may sometimes be without other evidences of disease. It consequently is perhaps safe to say that no conclusion should be drawn from apparent variations of this excess unless other physical signs are confirmatory. Yet one valuable fact is secure: a *certain degree* of right-sided excess is invariable. If the left fremitus exceeds the right and we can exclude the presence of consolidation, of pleural thickening or a plugging or narrowing of one bronchus, the only remaining conclusion is that heart and liver (or at least the heart) are transposed. Twice in the last eighteen months I have been fortunate enough to prove this on cases of congenital inversion.

In respect of the endocardial murmurs it is a great mistake to use one's stethoscope before applying the fingers over the four points usually designated as points for auscultation. The vibrations of chronically inflamed valves are often palpable and sometimes more readily identified as thrills by the fingers than they are as murmurs by the ear. This is notably true of the familiar presystolic thrill which is pathognomonic of mitral obstruction and may be palpable before it becomes audible at all (Sansom). But the systolic mitral and pulmonary murmurs, and the diastolic and systolic aortic murmurs are also often palpable as thrills, and the sense of touch can be educated so highly to the perception of them that one finally may almost seem to have ears in the tips of his fingers. I believe that it would be a real contribution to physical diagnosis if some one in authority would give this fact its due emphasis.

One further incidental observation. The books rarely mention the anomalies of situation which the functionally normal apex may exhibit. There are several. The most important is the persistence of the infantile position, in which the apex, instead of occupying, as normally, the fifth interspace inside the mamillary line, lies in the *fourth space* behind or close to the nipple. In a majority of these cases the phenomenon has nothing whatever to do with pericardial effusion, as is sometimes stated. It is simply an anomaly, and is entirely consistent with normal cardiac function.

With respect to percussion the principal thing is to do it thoroughly, over every square inch of the lung. An anilin pencil should be used to mark the cardiac area and the upper level of hepatic dulness. The descent of the liver with a long breath should be carefully noted. If it does not descend, the lung is either in an advanced stage of emphysema or it is bound by adhesions. Either fact is vital. The degree of advancement of emphysema should be considered great if the pulmonary resonance extends, behind, as low as the second lumbar vertebra. This sign, if present, will differentiate any case of true emphysema from acute asthma (Leube). It has been noted already that over angles and unusual convexities of the ribs there will be a variably dull note, whatever the condition of the lung. I have seen experienced men deceived by this. Percussion in infants and small children is difficult and deceptive, owing to their irregularly contracting muscles and relatively large viscera. Proper discussion of it would require a separate paper. Unless one has large *postmortem* experience with babies he will do well always carefully to control his percussion by the other physical signs of disease before drawing a conclusion.

In regard to auscultation I must be very brief. In it, I think, physicians are as a rule much more competent and careful than in the other methods.

The great matter, as everywhere, is thoroughness. The breathing, the voice, the whisper, and the adventitious sounds should be systematically noted over all parts of both lungs. If this were done oftener, there would be fewer reports of bronchopneumonia without physical signs. For the average practitioner a safe rule as to cavities is that of Leube—Do not pronounce finally on a cavity till an amphoric echo can be heard, added to the cavernous sounds, or till elastic fibers can be found in the sputum. Other signs may deceive the very elect. Furthermore, for any, except a man with unusual experience, the *cracked-pot sound* is apt to be a mere delusion. Crackles over the margins of the lungs elicited by the first two or three deep breaths and then disappearing, are probably due to temporary collapse, and have no clinical significance.

What will be the ultimate value of the fluoroscope in diseases of the chest is not yet determined. Deep aneurisms and large hearts covered by emphysematous lungs are observable by the fluoroscope when every other means of detection fails.

Passing on to the abdomen, which offers far greater difficulties in exact diagnosis than the thorax, percussion and auscultation are of secondary value, inspection and palpation being our main reliance. After inspection, the abdominal viscera should be palpated in turn, spleen, liver, stomach, kidneys, cecum, appendix, sigmoid, uterus, bladder, testicles and hernial rings. Internal examination of the rectum and uterus may also be needful. No one should omit a single opportunity to palpate all kinds and conditions of abdomens, for nothing but an educated touch will be of any service to us, and to gain an educated touch requires years of practice. The patient should usually be on his back with knees drawn up, arms by the sides, mouth open and breath drawn deeply and regularly. The knee-chest position is sometimes serviceable. The lower margin of the normal liver is always palpable; no one should be content with mere percussion of it. The spleen can be touched by an experienced finger twenty times where a beginner can find it but once. The same is true of the kidneys, and in a less degree of the cecum and appendix. A normal adult spleen is not palpable; a palpable spleen indicates either displacement or enlargement—usually the latter, and it rarely fails to have some bearing on the diagnosis. Neither spleen nor kidneys ought ever to be overlooked. I was once told confidentially by a student of mine, who had been practising ten years and had returned to New York for further study, that he had never felt a kidney in his life till I showed him how to find one. This, I think, reflects as seriously on the medical colleges as it does on the unfortunate individual mentioned. A very little primary instruction is needed to teach medical graduates how to go systematically about the use of their fingers.

An instance or two of careless abdominal work may be briefly mentioned—instances which probably any of the gentlemen here can parallel in their own experience. A lady, long a victim of chronic nervous dyspepsia, came recently to a city man from out of town in a paroxysm of terror saying that her doctor had told her she has "a resistance" in the epigastric region which he thought to be gastric cancer. An examination readily showed that "the resistance" was only a localized contraction of one rectus. Another patient, a man of forty years, recently from Texas, came to me asking advice about a "swelling" in his abdomen. I found he had a monstrous spleen, from the history and the symptoms apparently an ague-cake. During the consultation he spoke of having just had his life insured in a downtown company. I asked how he got passed with such a tumor. His reply was, "Well, the doctor didn't examine my abdomen, and I wasn't going to tell him."

All such cases solemnly emphasize the importance not only of systematic examination of the abdomen in every case, but of losing no possible opportunity of training one's fingers on every patient whom we can persuade to let us make an abdominal examination.

All this done, we come to the urine, which should be examined as regularly as the heart and lungs. Many a physician seems to believe that though his patients are liable to cardiac or pulmonary disease, they bear a charmed life as far as their kidneys are concerned, and therefore a routine urinary analysis is mere waste of time. For these men, no lesson is so effectual as to have one or two of their patients die on their hands unexpectedly of diabetic coma or acute uremia—occurrences which the gentlemen present have heard of as often as I have. To test the reaction of the urine, the specific gravity, albumin, sugar, urea, and sediment, requires about ten minutes—often less; and the time is not wasted!

It is equally desirable to be sure that the blood is normal. In most cases the examination of an Ehrlich "triacid" stain will be enough, except where there is reasonable suspicion of the presence of parasites in the blood—the plasmodium, or the filaria. Whether a Widal test shall be made, or the sputum or stomach contents examined will depend upon the nature of the individual case and—in the phrase of the eminent Frenchman—"the brains of the physician."

The examination of the nervous system should not be forgotten, but it is a more special and technical subject than we have room for here.

When the facts have been ascertained and collected, the third and crucial part of the physician's task is reached—the diagnosis, the *judgment*, the assumption of a cause or causes which shall explain the varying and often perplexing phenomena which his examination has elicited.

Of the logical fallacies which beset this process on every hand time fails to speak. A word, however, may be added about one of the general logical laws on which diagnosis proceeds, the "Law of Parcimony." This law is that "causes are not to be multipled beyond necessity." Yet the rule is not to be too rigidly interpreted. For example,

enlarged axillary glands concurring with a tumor of the mamma would require us to suppose a malignant mammary growth with glandular metastasis. Yet after removal the growth may prove to be a fibroma and the glands tuberculous. So that we must choose not always the smaller number of causes, but the number of causes that explains the phenomena most satisfactorily. A "satisfactory" explanation is an indefinite term, but nevertheless as the years go by and our experience and study enlarge, we shall be able gradually to increase the number of our "satisfactory" diagnoses, and eliminate the errors of our earlier years. Eternal vigilance is the price. A good rule for the medical man is to send his patients to the surgeon or the *postmortem* room with a *written diagnosis*. He will be often enough laughed at; yet he will gain enough to compensate for the ridicule. And he may console himself by remembering that the surgeons and pathologists, for all their scorn, have fields of labor of their own where they too, like us, are groping in darkness, and only by slow degrees feeling their way to the light.

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THE MINERAL WATERS OF MT. CLEMENS, MICHIGAN, AS VIEWED AND COMPARED WITH THOSE OF EUROPEAN WATERING PLACES.

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DURING my trip to Europe last year, a considerable portion of my leisure time was spent in the more prominent and renowned watering places of Germany and Austria, with a view of investigating the merits and medicinal virtues of their respective waters, laying special stress upon their study from a chemical, physiological and therapeutic standpoint, and devoting part of my time in obtaining some comprehension of the auxiliary methods in vogue at the various resorts, principally those pertaining to diet and hygiene, etc., in order to compare them with the baths and the methods employed here at Mt. Clemens, and, if practicable, to apply such innovations and foreign measures to the best advantage in fostering and strengthening the merits and reputation of our own salubrious sulpho-salines.

It is universally conceded by medical authorities that the minute and systematic attention accorded to these particular branches of medicine, to physical culture, and to detail work in general, as exemplified in the watering places of Europe, has contributed in no small measure to their fame as health resorts. Having this object in mind and such a task before me, sojourns of longer or shorter duration were inaugurated at Carlsbad, Marienbad, Franzensbad, Elster, Kissingen, Wildbad, Baden-Baden, Homburg, Wiesbaden, Kreuznach, Nauheim, Wildungen, Oeynhausen and Aix-la-Chapelle.

A few of the less important ones were also included, namely, Soden, Ems, Schwalbach, etc. Prolonged stays were made at Carlsbad, Marienbad, Elster and Franzensbad, the longest, however, in Kissingen, Nauheim, Kreuznach, Aix-la-Chapelle, Wildbad and Oeynhausen, some of those cities and towns exhibiting more interest to me on account of their mineral waters, showing an analysis resembling in some respects those of Mt. Clemens, consequently bringing them nearer to or even within the same classification as our own sulpho-salines. At the same time more importance was attached to these health resorts and more attention devoted to them because their respective waters, being principally administered externally in the different forms of baths, owe their fame and reputation to the successful treatment of almost all metabolic disturbances and ailments of the human system, including especially some of those diseases, *i.e.*, rheumatism, gout, skin diseases, diseases of women, catarrhal affections, etc., the cure of which brought prominence to Mt. Clemens and made this resort a formidable competitor. Only a few days of observation and study were given to the more fashionable resorts, comprising Homburg, Wiesbaden, Baden-Baden, Ems, Schwalbach, etc., the throng of "Passanten" and "Curgaeste," seeking these idyllic spots, probably more for enjoyment and recreation, than to indulge in a systematic cure by the application of their effective springs. In all of the resorts mentioned the first thing that impressed me as being most rational and praiseworthy was the observance of a distinct system introduced by the medical fraternity and approved by the authorities in charge of the various springs; and it also occurred to me that, while physicians considered the mineral waters the chief medicinal agent, they did not rely exclusively on the efficacy of the springs, but paid considerable attention to promoting and explaining the feasibility of auxiliary methods and details. The careful physical examination of the patient, of the blood, urine, and, if necessary, the fecal matter; the prescribing of dietary and hygienic regulations, and the absolute refusal to allow any one the privileges of a "curgast" without the examination and consent of a physician, made apparent the exactness of the work. The inhabitants of the different resorts, old and young, inspired by the merit of the waters and success accomplished, seem to idolize the springs and consider them sacred. They ostensibly have perfect faith and confidence in the authorities and physicians entrusted with the management and guidance, who are watching over the destinies of their cities or towns, and all are united in urging visitors and patients to be obedient to the instructions as laid down by the doctors, lest the cure might

not be as successful as otherwise; and therein lies in a great measure the scientific and commercial prosperity of the European resort. This careful observance of method and detail was particularly noticed in Carlsbad, Nauheim, Kissingen, Marienbad and Oeynhausen.

In the majority of our American health resorts, very little attention is seemingly attached to the importance of auxiliary methods and detailed application. Everybody appears to be enthusiastic and satisfied, commercially and possibly scientifically, with the results so far achieved. American patients in European resorts are models in themselves. The physicians and authorities there have them well in hand, in consequence of their admirable system. American patients in American resorts would be quite as exemplary but for the reason of the existence of unsatisfactory methods or no system whatsoever.

No matter how exact the American physician may be in the examination of his patients and in explaining the importance of dietary, hygienic and other precautions, patients are very apt to transgress and unconsciously break away from the rules and advice given. The whole environment, including the attitude of the laity, leads them to the impression that all that is necessary is to jump into a bathtub or drink enough of the water and Providence will watch over the rest. Should anything unforseen happen afterward, the blame is naturally and quickly attributed to the supposed inefficiency of the waters.

In all probabilities, some of the springs, Mt. Clemens included, would have risen to a higher plane of recognition and earned their scientific standing and success, with the attending prestige in the eyes of the medical world even in a much shorter space of time than they already have, if, at the very inception of the discovery of the therapeutic value, more attention had been accorded the investigation and study of the physiological action and effect and chemical composition of their waters. And, if in addition, the proper steps had been observed in the adoption of a certain subsidiary system pertaining to diet, hygiene, etc., the percentage of patronage and cures would have been vastly increased. What would have been the effect medically, to say nothing about its financial aspects, upon Carlsbad, Nauheim, and all other European resorts of note, if, after their discovery and the introduction of their waters to the world as curative agents, empiricism and commercialism had been allowed to reign indiscriminately, slaughtering and burying all attempts at scientific progress in consequence of a faulty organization and a reluctance and apathy on the part of the authorities and citizens? The result would have been undoubtedly a scientific lethargy, to awaken from which would have presented quite a problem and a difficult if not impossible task. In late years, Mt. Clemens, taking cognizance of the advantages of medical research, has steadily been emerging from a chaos of empirical application, adapting itself to the more modern methods of balneo-therapy, diet, and hygiene, commensurate with the evolution of scientific and commercial progress. This is demonstrated by the yearly additions of new hotels, bathhouses, etc., giving Mt. Clemens renewed hope for further prosperity in the new century. Let us look briefly into the causes that brought distinction and fame to the health resorts of Germany and Austria, and endeavor to compare the same with Mt. Clemens.

Carlsbad was discovered on the occasion of a hunting trip of Emperor Charles IV.—is well known and has been famed for centuries for its healing springs of undoubted medicinal merit. It owes its therapeutic success as a remedial agent chiefly to the systematic ingestion of its thermal waters into the system. Its waters are drunk in prescribed quantities, at specified intervals and at certain temperature, and they are assisted by the application of the different forms of baths, *i.e.*, moorbäder, mineral, electric, sand and gas baths, aided by adhering strictly to a dietary regimen, based upon physiological and chemical observation, individualized and made suitable to the condition of the respective patient. The dreaded and wrongly heralded terrible restrictions pertaining to the cuisine are a myth.

In addition to the auxiliaries, bath and diet, the hygienic resources for the necessary exercise and rest to the mind and body are amply supplied naturally by the beautiful surrounding country, its fine scenery, forest-topped mountains and an atmosphere permeated with ozone; artificially by splendid drives, walks, and parks, gymnastic and electrical institutes (Zander), etc., etc., and artistically by a magnificent orchestra sending forth strains of soothing and enchanting music, with an occasional terpsichorean delight at the casino and theater. The sixteen different thermal springs of Carlsbad of which the Sprüdel and Mühlbrunnen rank first, are the main representatives of the alkalo-saline mineral waters, containing principally sulphate of sodium and potassium, chloride of sodium, carbonate of lithium, strontium, sodium, calcium, magnesium, iron and manganese, some carbonic acid gas, etc., ranging in temperature from 95° to 162° F., with a faint saline taste. They act physiologically by their warmth as they come into immediate contact with the mucous membrane of the stomach and alimentary canal. They thus allay pains and spasms of these organs, stimulate the circulation and glandular secretions, increase the activity of the digestive organs, and change the condition of the blood and derivative secretions (urine, bile, etc.,) by increasing its alkalinity. In consequence it is indicated and recommended in the

treatment of diseases of the stomach, intestines, spleen, kidneys, and all metabolic disturbances, its fame having spread, however, through its successful treatment of severe liver complications.

Next to Carlsbad, Marienbad in Bohemia enjoys a very creditable reputation, especially in the treatment of obesity, fatty infiltrations of the liver and heart, obstruction of the portal circulation, habitual constipation, chronic catarrhal conditions of the stomach and intestines, etc., its physiological action being more intense than the waters of Carlsbad. In their chemical composition they resemble the Carlsbad waters, are doubly stronger and have a mean temperature of about 50° F. Franzensbad in Bohemia and Elster in Saxony are similar to Marienbad, and are equipped like Carlsbad and Marienbad with all the necessary auxiliaries and methods conducive to the health and welfare of an increasing patronage. Kissingen in Bavaria is also a powerful saline of remedial merit, and is frequented by many patients from all parts of Europe on account of its efficacy in dyspeptic conditions, etc., and has received considerable notoriety through the yearly visits of the late Ex-Chancellor of the German Empire, Fuerst Bismark. Wildbad in Württemberg, a thermal saline, is recommended principally in muscular rheumatism, neuralgias, and as an after-treatment in aiding tedious convalescence, etc. Wildungen in Hessen-Nassau derives its large patronage through the splendid results achieved principally in the successful treatment of diseases of the urinary tract.

Another health resort, favorably known for hundreds of years within the borders of its own land as a healing spring in numerous diseases, has suddenly sprung into significance and gained meritorious recognition throughout the civilized world, because of its carbonated thermal saline waters in balneo-therapeutic application in the eminently satisfactory treatment and successful relief of almost all pathological or functional derangements of the heart, aided by the administration of the famous auxiliary method known as resistance movements, Oertel's "Terrain Curen" and other hygienic, therapeutic and dietetic measures. I refer to Nauheim in Hessen-Darmstadt, near Frankfort on the Main. To the untiring efforts of Drs. Schott, Bode, Grödel and others, in chemical and physiological work upon the waters of their various springs, belong principally the credit in presenting to science the bath system adopted and now in operation at Nauheim. Physiologically, Nauheim water possesses powerful stimulating properties for the nervous and circulatory systems, and eliminates old infiltrations, etc., through its lymphagogic and cholagogic action. Hundreds of Americans and English visit Nauheim each year, not alone for the relief of heart complications, but also for nervous affections, female disorders, rheumatism, gout, etc. Kreuznach and Oeynhausen in Germany are also saline springs of note and Aix-la-Chapelle fastened its hold on the medical fraternity years ago through its successful achievements in syphilitic affections.

In attempting to draw a comparison of the chemical analyses, physiological action and therapeutic efficacy of the European resorts to which I have briefly referred in the foregoing remarks, with those of our own springs, one is confronted with a difficult problem and must admit that it is quite impossible to judge them correctly from the same standpoint or place these remedial agents in the same category or classification. All show a distinct analytical composition; some claim a physiological supremacy and others are again held to be therapeutically superior in the various manifestations of disease. Mt. Clemens also is blessed to a certain degree with these well-defined characteristics pertaining to analytical, physiological and therapeutic qualifications, and boasts of its peculiarily unique balneo-therapeutic merit and success. None of the waters mentioned resemble ours very closely. Some show an analogy, inasmuch as they contain chemical products of the same composition, but not one can present such an admirable array of physiological and chemical strength as the wells of this leading bath town of Michigan give up from the bowels of the earth. Many of these springs are classified as thermal salines with or without CO_2; others come under the categories of the cold alkali salines; again we find in others sulphur combined with alkalies in the form of different salts as the chief agents. Then, again, sulphuretted hydrogen in conjunction with various salts poses as the paramount factor and one or two of the waters display evidence of iodine and bromine combinations. If we should take the waters of Aix-la-Chapelle, Wildbad, Kreuznach, Oeynhausen and Nauheim and mix them together, this aqueous coalition would possibly present analytically most of the elements and ingredients thus far discovered and represented in the waters of Mt. Clemens, the ratio of percentage, however, favoring the American spring by a proportion of 23 to 5. I doubt if there is to-day a spring or well, in existence or operation that can display such a combination of valuable chemical elements in the form of various salts, etc., and in such amounts as do the waters constituting our sulpho-bromo-iodo-salines.

The thorough investigation of these mineral waters conducted in recent years by Mr. John Meyer, chemist at Mt. Clemens, disclosed the presence of most rare and valuable elements known in the science of chemistry and are partly as follows: Sodium, calcium, magnesium, chlorine, iodine, bromine, potassium, lithium, rubidium, caesium, strontium, boron, aluminum, silicon, iron, manganese, sulphur-

trioxide, and gases of hydrogen-sulphide, carbon-dioxide, and traces of hydrogen-selenide. All these named elements present themselves in the proper quantities to form a combination of their respective salts, of which one of our mineral baths contains about one hundred and twenty-five pounds in solution. Physiologically it is claimed for the waters of the different European resorts that they are exceedingly effective in bringing about the necessary metabolism in the system by stimulating the glandular secretions, hastening cell proliferation, etc., and eliminating waste material, by the process of absorption. It is with perfect justification that they make the assertion. Not alone do their waters, applied externally, impart to the skin the warmth and mechanical stimulus of an ordinary water bath, but also a chemical as well as an electrical one, due to the ionic condition of the mineral ingredients, the carbonic acid, and sulphuretted hydrogen, producing reflex modification of the changes of material in the system.

On account of the high concentration of our own mineral waters, here at Mt. Clemens, holding in solution the various salts, proportionately as found in the human blood (namely, chloride of sodium, chloride of calcium, chloride of potassium, etc.), besides the powerful alterative effect attributed to and produced by the sulphur, iodine, and bromine they contain, and our methods of administering them, we claim practically the same as is claimed for the European resorts; in addition, however, we emphasize the fact that the action is more pronounced and speedy, and the results, consequently more satisfactory.

Writers and physiologists for a long time fostered the idea that no ingredients were absorbed through the skin during the bath, but this teaching is shown to be false by the latest researches of such eminent clinicians and physiologists as Wittich, Gutman, Wolkenstein, and Chernszwesky. They say in substance that the skin is permeable for watery as well as alcoholic solutions, being more energetic, however, with increased temperature. The absorption is carried on in different ways; by diffusion, through the blood-vessels, and through the lymphatic system. Patients will invariably speak of a peculiar salty taste in their mouths, some hours after the completion of a bath here at Mt. Clemens, and experiments by our chemist upon the urine of patients who have completed one week's daily application of our mineral baths with the customary massage, and who have not taken any medication whatever during the time, revealed the remarkable fact of the presence of distinct traces of iodine and bromine. This demonstrates beyond a doubt that absorption has taken place through the skin and resorption into the general circulation. The concentration of the Mt. Clemens salines and the amount of salt substance they hold in solution are certainly not without a distinctive value. When a body is immersed in one of our mineral baths the skin separates two salt solutions of unequal concentration, one being the blood serum, and the other the mineral water proper, and, according to the physical law of osmosis, and ionic action and properties of the molecules, and equalization of the two solutions will be brought about or at least attempted. While one must admit that the skin prevents a direct transudation, an approximation of the two solutions is at least attained, the secretions of the body (blood and intercellular liquids), enter more energetically into the course toward the periphery of the body, thereby establishing an increased lymph-current to those parts. This is in direct evidence that the quantity of the various salts held in solution in this mineral water is of very great importance regardless of the absorption. The more concentrated the mineral water for our purpose, the more energetic and pronounced these phenomena will be in manifesting themselves. Recently, the old theory of value of certain salts, especially common salt, for the maintenance of health and life has been revived by a great many scientists, some going so far as to say that chloride of sodium in conjunction with chloride of calcium and chloride of potassium constitute the vital energy of the blood and its circulation, and are the causative factors in controlling the heart beats. The importance of these salts for the life and function of the blood is conclusive; and in all metabolic disturbances of the human system, including infection, autointoxication, nervous, anemic, and toxemic disorders, we find a deficiency of these particular salts. To the absorption of these saline ingredients, and alterative action of the sulphur, iodine and bromine, etc., ridding the system of waste material, and to the stimulation of the nervous and circulatory system by the application of our mineral waters in the form of baths, the balneo-therapeutic value and efficacy of the Mt. Clemens sulpho-iodo-bromo-salines have been amply established. This is especially noticeable in recent years and is sufficiently demonstrated by the increasing patronage of those who seek relief, principally from rheumatic conditions in all its forms, including acute and chronic, gout, arthritis deformans, skin diseases, syphilitic manifestations; diseases of the nervous system; catarrhal conditions of the alimentary canal, etc., diabetes mellitus and insipidus, tedious convalescence, etc. In diseases of women the mineral waters applied in the form of vaginal douches in consequence of traces of selenide of hydrogen, etc., have shown themselves to be indispensable in catarrhal and other conditions of the female genital tract.

The views herein expressed, relative to the merits and conditions governing European resorts and Mt. Clemens, are based on incon-

trovertible facts as they exist. German, Austrian and European resorts, in general, enjoy the distinction of being conducted on a scientific basis, while at American watering places we are regretfully obliged to admit that there is as yet ground for improvement in this respect.

THE TREATMENT OF CHRONIC PURULENT OTITIS MEDIA.[1]

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IN treating a case of chronic purulent otitis media we should have three objects in view, first, the cure of the otorrhea; second, the improvement of the hearing, and, third, the relief of the distressing subjective sounds, if present.

In the treatment of the discharge the first cardinal principle is cleanliness, and this can be accomplished in one of two ways. If but little discharge be present, and the patient seen frequently by the surgeon, the existing discharge can easily be removed by mopping the parts with sterilized cotton, wound on a cotton-carrier. After the field has been gone over in this way it should be thoroughly cleansed with some comparatively strong non-irritating germicide or disinfectant, and one which the writer has found beneficial is the following

℞ Boric acid.....gr. xx
Sol. hydgrarg. bichlor. 1-1,000..℥ij
Spir. vini rect. ad. oz. 1.....℥j

The parts are thoroughly cleansed with this solution, and any granular surface is touched with a small cotton-tipped probe, dipped in silver nitrate, of a strength ranging from 20 to 240 grains to the ounce of distilled water. This will, in a large number of cases, so stimulate these structures, that by using such treatment two or three times a week, a cure will speedily follow. If, on the other hand, the discharge is profuse, then the patient, or whoever is to care for him, must be taught the proper method of syringing the ear and the treatment carried on by irrigation. Usually a hard rubber ear syringe with a blunt point or nozzle, holding an ounce of fluid, should be used. In the case of young children it is desirable that the syringe be of soft rubber, in order not to irritate the meatus or canal, and in shape should be like a round bulb, with a long drawn out point, through which the fluid passes on its way from the chamber of the syringe to the canal.

A point to be remembered in syringing the ear, and also to be impressed upon the patient or nurse, is to give instructions in all adult cases to grasp the auricle gently between the thumb and fingers of the left hand and draw it upward, backward, and a little outward, thus straightening the meatus and cartilaginous canal, and bringing it on a line with the osseous canal. Otherwise, when we use the syringe, we shall be directing the stream of fluid against the side of the canal wall instead of directly into the lumen of the passage, as drawing the auricle in the manner described will overcome the irregularity at the opening of the canal and allow the nozzle of the syringe to pass into the meatus deeply, with its tip directed downward and forward. In syringing the ears of a child under three years of age, the auricle should be drawn outward and downward, as this position best aids us to overcome the natural curve of the canal at that age. The frequency of irrigation will depend largely upon the character and quantity of the discharge, and at no time must it be allowed to accumulate to any extent in the auditory canal. In an ordinary adult case, it should be cleansed every three or four hours at first, and as the discharge begins to lessen, then diminish the frequency of irrigation to three times a day, or once or twice a day, and later even to every second or third day. In a child it will be necessary to irrigate more frequently on account of the smallness of the canal and the tendency of the walls at the meatus to lie in contact, thus driving back the secretion. In these cases we should irrigate as frequently as every two hours until we notice a gradual lessening of the discharge, and from this point on diminish the frequency to every three, four, or six hours, depending upon the quantity of the discharge that presents itself each day. It is always well to bear in mind that an ear should be irrigated only frequently enough to keep the discharge from accumulating in the canal, as too frequent irrigation serves to soften, make flabby, and lessen the integrity of the parts, thus prolonging the disease. Only a small amount of force should be used in irrigating an ear, whether the case be a child or adult, and we should never use a cold solution, but one tepid, or slightly warmer, depending upon the amount of comfort given to the patient. The quantity to be used at each irrigation varies anywhere from a quarter of a pint to a pint. Rarely is it necessary at one sitting to use more than the maximum quantity given above.

If irrigation produces, as it sometimes does, disagreeable symptoms, as pain, vertigo, or nausea, and these persist, then no matter how profuse the existing discharge, we must cease the irrigation and remove the discharge by frequent mopping and cleansing with cotton. In all cases after irrigation, it is desirable to dry the deeper parts as well as the meatus with cotton.

The various solutions used for syringing the ear have been legion, but only those will be mentioned which the writer has found of value from a clinical standpoint.

[1] Read before the annual meeting of the Medical Society of the State of New York, Albany, Jan. 29, 1901.

A solution of bichloride of mercury, in strength ranging from 1-2,000 to 1-5,000 in boiled water, is the solution most used, and the one from which we obtain the best results at the present time. A solution of value, and one largely used to-day by the general practitioner, is that of boric acid of the strength of 20 grains to an ounce of boiled water. As a cleansing solution it answers the purpose very well, but taken from a disinfecting or germicidal standpoint, it leaves much to be desired.

A solution of carbolic acid in sterilized water of the strength of one or two per cent. was formerly used. In obstinate cases, a weak solution of formaldehyde, 1-1,000, is often of service, owing to its active germicidal properties, but even in this strength it has to be discontinued many times, owing to its irritating qualities, and if continued should be used in a much weaker form. A solution of permanganate of potassium, half a dram of the liq. potass. permanganas in from four to six ounces of sterilized water, is often used to abate the discharge, on account of its strong disinfecting properties, and at the same time it acts as an excellent deodorizer when we have a foul smelling discharge to treat.

When a certain amount of exfoliated epithelium is found in the discharge, accompanied by a roughened condition of the canal walls and a roughened and excoriated condition of the meatus, we have found of the utmost value a one-eighth per cent. alcoholic solution of salicylic acid of the strength of from one to two drams of the solution in four ounces of sterilized water, the acid here having a marked healing effect on the excoriated tissue. For simple cleansing purposes, a tepid solution of plain sterilized water will be all that is needed.

In a few of the cases coming under our observation, where the so-called irrigation treatment has been used, they become perceptibly worse, and the discharge increases instead of lessening. When this occurs, the patient, or whoever is caring for the case, must systematically use the dry treatment just spoken of above, in order to obtain the beneficial results desired.

In order to save the patient's clothing while using the irrigation method, we should always have held by the patient beneath the ear, a kidney-shaped hard rubber or agate ware basin, to catch the discharge coming from the canal. These are easily obtained and come in all sizes. As soon as the discharge begins to lessen perceptibly the congestion and swelling gradually subside and the structures slowly regain their normal appearance.

In all cases when treatment is begun, a thorough investigation of the upper respiratory tract should be made, and, when these structures are found involved in a catarrhal process, we should direct our treatment to the cure of these pathological conditions as well as caring for the ear alone, for, if these conditions be neglected, we may temporarily help the aural conditions, but exacerbations will occur from time to time, owing to the lack of proper treatment in the nose and nasopharynx; especially should we always search for any lymphoid hypertrophies, and if found their removal is imperative at once, as well as the removal of any other obstructive condition which interferes with a normal nasopharyngeal function.

When the drum membrane has been destroyed over a considerable area and we find the inner tympanic wall exposed and presenting a mucous surface that is swollen, congested, and covered with mucus, or only slightly moist, then we must stimulate this surface by applying solutions to the mucous membrane lining the internal tympanic wall. The solution giving the best results is one of silver nitrate, applied in varying strengths, beginning with a weak solution, as ten grains to the ounce of distilled water and increasing this strength, as indications arise, to 240 grains to the ounce, or even as high as 360 grains to the ounce, when a rapid effect is desired.

A point of value in applying the silver solution may be mentioned here, and that is, care should be taken not to touch any portions of the canal walls or other parts of the tympanum except the particular area we wish to stimulate, and this can be accomplished easily by exercising a little care in preparing the cotton tipped probe. It should not be large or bulky, but small, having only the tip dipped into the solution, and all residue pressed from even this before introducing it, as otherwise the normal tissue will be smeared over and an excessive irritation caused by its coming in contact with such tissues. Other solutions used with beneficial results are varying strengths of the zinc and copper salts, of the latter, usually a two per cent. solution is the one most frequently used.

As the discharge becomes lessened and the patient is seen less frequently, a solution to be used at home should be given, composed of the following ingredients:

℞ Boric acid .....gr. xx.
Sol. hydrarg. bichlor, 1-1,000.....3ij.
Absolute alcohol to make.....℥j

Five or ten drops of this solution placed in the ear twice a day at first, then later once a day, and, as the cause for stimulation becomes less, every second day, will act admirably, not only as a stimulant, on account of its alcoholic properties, but as an antiseptic, due to the presence of the boric acid and bichloride solution in preventing the formation of further granulation tissue. The method of placing this solution in the ear can be accomplished easily, by one of two ways. Either a dropper can be used, or the requisite number of drops can be placed in a small spoon, then warmed, if desired, and poured into the auditory canal,

the head in each instance being held well over to the opposite side. If any residue remains after one or two minutes, it can be removed by turning the head in an opposite direction thus allowing the liquid to escape.

When the discharge is markedly persistent and the above applications fail to bring about a satisfactory result, the writer has found of benefit the use of the so-called Powell's solution, which consists of the application to the diseased surface of a solution of pure carbolic acid. This is allowed to run into the canal, the head being held in a horizontal position until the auditory canal is nearly filled. It is retained in this position from thirty to sixty seconds, and then the canal is quickly syringed with a solution of absolute alcohol. In this way the alcohol counteracts any escharotic action which the carbolic acid would have upon the normal tissues, and the diseased parts are stimulated and cleansed at the same time. By this treatment excellent results are obtained in many cases that would not yield to the ordinary methods in vogue.

A question may be asked as to the amount of pain involved in this procedure. It is very slight, as the carbolic acid is an anesthetic and the quick after-application of the alcohol causes the patient to complain only of the ordinary stinging sensation usually experienced, in a mild degree, upon the application of this liquid.

In all cases under treatment we should, after thorough cleansing of the canal, direct the patient to perform inflation by the Valsalva method, so as to drive out from the middle ear any retained secretion that may be present. Should they be unable to do this, then gentle inflation by means of the catheter should be practised, and the secretion thus displaced be removed before our final application is made to the surface to be stimulated.

The practice of instilling oil of any kind into the canal should not be countenanced, as it forms a media for the development of vegetable fungi of various kinds, and when once these conditions form along the canal they are exceedingly irritating and difficult of a rapid cure.

As to the use of hydrogen peroxide in the auditory canal of a patient suffering from chronic purulent otitis, there is a wide diversity of opinion. Some authorities report most brilliant results from its use, both by syringing the canal freely with it, and also instilling it into the canal, claiming when so used it cleans out the small cavities by displacing retained secretions, which otherwise would not appear without the use of this agent. I believe, however, we have other means at our command that will do the work quite as well, without exposing the patient to the risk of displacing and driving backward through the *aditus ad antrum* this retained secretion into the mastoid antrum, and thus exciting an inflammation of this structure by the infection contained in the displaced secretion, for it is very plain to be seen that such secretion, when displaced, can travel this path quite as easily as any other, and the writer has seen several cases of purulent otitis under treatment, doing fairly well, when it was thought advisable to use this fluid, to hasten matters if possible. Where no sign of mastoid involvement had previously existed, under the use of this fluid, a distinct mastoiditis developed, and in four cases the mastoid had to be opened. So, from observation and personal experience, I am opposed to its use. Under no circumstance or conditions should we in this disease either early or late put a large quantity of powder in the canal and allow it to remain there, for it becomes moistened and later forms a crust, thus preventing what we wish to avoid, namely, a damming backward of the secretion, and the practice of supplying a patient with a quantity of powder to use by himself cannot be too strongly urged against, as many times he will use it and drive the secretion backward by crusts forming firmly over the point of perforation, and this acts as a barrier to the future drainage of the middle ear, as well as subjecting the patient to the danger of mastoid and other intercranial involvement. After the discharge has been reduced to a minimum amount, so that it only moistens the part, then we can use with much advantage some of the many antiseptic and astringent powders by insufflating a small quantity over the moistened area. The powders more commonly used here are: Boric acid, aristol, acetanilid, nosophen, zinc oxide, iodol and alum. Iodoform was formerly used extensively, but has been largely discontinued, as it is very unpleasant for both the patient and surgeon, on account of its peculiar odor, and it often gives rise to a most distressing dermatitis. Dermatol has also been used, but possesses no particular curative effects. In many cases where the discharge is intractable and comes from the attic region, the use of the intratympanic syringe is of the greatest value, as by its use we can introduce solution of various strengths, upward and backward, beyond the point of vision. The writer has used a small glass instrument of varying sizes, with short or long tip and broad end fitted closely with a rubber similar to that of the pipette. These little glass pipettes are made in almost any size and the tip can be made at any angle one wishes. They are easily handled, neat, clean, inexpensive and contain for treatment all the way from one to twenty drops of the fluid which is usually a solution of silver nitrate.

In cases where we find a large amount of granulation tissue present, we proceed to destroy this after first cleansing the canal and area to be destroyed. If the granulations are

only moderately large we can easily destroy them by means of chemical agents. The two agents of this character most used are silver nitrate and chromic acid. The surface to be cauterized is first dried and then upon a metal probe a bead of either of the above agents is fused and applied carefully to the granular area. Care should be taken not to smear these agents over adjacent parts, and all excess or residue should be mopped up with a cotton pledget. The actual cautery has been recommended as admirable for the destruction of these granulations, but its use here is altogether too difficult of application when we have at hand other means equally as good and much easier to apply.

After cleansing the area to be cauterized we should apply to the granular surface about to be destroyed a solution of cocaine hydrochlorate, of a strength from five to ten per cent. This application can be made by soaking a small pledget of cotton in the cocaine and carrying it with the forceps directly against the surface we wish to anesthetize, or we can apply it by means of a cotton-tipped probe, and hold it against the surface for a moment or two until the anesthetic effect has taken place.

If this preliminary be carried out in these cases, there will be but little or no pain experienced by the patient during the destruction of this exuberant tissue, and this in itself is a factor to be taken into consideration, for no one likes to suffer pain when it can be so easily avoided. When the granulations are larger and polypoid in character, their removal is best effected by means of the wire snare. The loop of the wire is passed over the growth and carried backward and inward to its attachment and the growth is cut off in this way by the successive turning or screwing of the thumb-piece of the snare, thus tightening at each turn the loop of wire surrounding the growth.

As a more rapid means of removal, a sharp curette is preferred, and this can be passed quickly into the canal at the side or beneath the growth and carried backward to its point of attachment, which is usually a rather firm pedicle. When this point is reached, the curette is raised and manipulated so as to partially twist the pedicle around the shank of the curette, having the sharp curve of the instrument rest upon the superior or upper surface of the pedicle. The curette is then pressed inward against the surface from which the growth springs, the pedicle is severed close to its attachment, and the growth is removed at the same time the instrument is withdrawn. Cocaine should always be used previous to their removal, in order to relieve the patient of as much pain as possible. An adjunct of great value, at our command in the removal of these growths, is an application to them (and particularly at their base) of a solution of suprarenal capsule. Following is the formula used by the writer:

℞ Adrenals (Armour Desic.).....3i
Acid boric .... grs. xvi
Aq. cinnamomi.....3iv
Aq. camphoræ cal.....ʒi
Aq. dist. cal., q. s. ad.....ʒii
M. Macerate for four hours, filter.

The use of this solution enables us to remove large growths, and what would otherwise be a bloody operative case is rendered practically bloodless by the use of this fluid. It should remain in contact with the tissue to be removed for at least ten or fifteen minutes prior to the operation. Our after-treatment is also greatly facilitated by its use, and now we are enabled to cauterize the base left by removal of the growth without continually going over the surface for several minutes with cotton pledgets, trying to staunch the blow flow before we apply our cauterization. Many times, by the old method of removal, without the use of the suprarenal extract, the cauterization of the base had to be left for a second sitting on account of the free hemorrhage existing.

For the first twenty-four hours after the removal of such a growth, it is well to pack the canal loosely with a strip of plain sterilized gauze. This acts in a two-fold manner. First, it prevents any marked secondary hemorrhage, as sometimes occurs after the use of the suprarenal extract, and, secondly, it acts as a protection. It should, however, always be removed the day following. If the patient is not to be seen for a few days, under no condition should the canal be packed, but if much discharge is present, the patient should be directed to use the irrigation method for a few days, until the discharge diminishes sufficiently, or until the patient again comes under the observation of the surgeon for further treatment. In all cases where exuberant granulations or polypi have been removed from the auditory canal and middle ear, the subsequent treatment is carried out on exactly the same lines as that already mentioned, *i.e.*, keeping the parts sterile and clean, stimulating from time to time as needed, and later when the discharge diminishes, the use of the drops, before referred to, twice a day.

If, after an ear has been treated in this way for a period of ten days or two weeks, the discharge is still present, and there is a marked tendency to a reformation of the granulation tissue, then it may be said with a degree of certainty that we have to deal with dead bone farther back, and no time should be lost in its removal.

Aspergillus is quite frequently found just within the meatus, on the canal wall, on the remains of the drum membrane, or on the exposed internal tympanic wall where the ear has previously been the seat of a purulent inflammation and its presence may mislead us into thinking that the ear has begun to discharge again. The cause of this is the presence of this

fungus at one or more of the points just mentioned. It develops slowly in the beginning when it lodges upon the surface, owing to a lack of moisture, but later, when even a slight amount of moisture comes in contact with it, the growth is a rapid one, and the discharge given out from it is often offensive and accumulates around the meatus.

The treatment is simply keeping the parts clean by the ordinary method, and scrubbing the surface all over with a cotton-tipped probe dipped in the alcoholic solution, previously mentioned, and the insufflation of just enough finely powdered acetanilid or boric acid to cover the surface from which the fungus grows. A few treatments like this will suffice to clear up the condition as well as to relieve the excoriations caused by the discharge at the meatus.

In all cases of purulent disease of the middle ear, where, upon examination, we find the drainage insufficient we should lose no time in enlarging the opening through which the discharge is passing, and many times it is desirable, instead of enlarging the old perforation, to make a free incision through the drum membrane at some other point to facilitate more rapid drainage. This is particularly imperative when the discharge emanates from the lining membrane of the middle ear, and we find it being inadequately drained. It is in these cases that the subsequent use of the middle ear syringe is of the utmost value, as after a thorough cleansing of the tympanic cavity we can introduce the stimulating or astringent solutions, and a sufficient quantity should be used each time to completely fill the tympanic cavity. The fluid will often pass through and down into the Eustachian tube, but this will do no harm, provided the solutions used are not too strong, and rarely should we use a solution of silver here at first stronger than 1 per cent. If the case be a persistent one, this intratympanic syringing should be practised each day until the discharge is perceptibly lessened; then every second day, and later less frequently, as twice a week.

When a small amount of discharge continues despite all treatment and the parts upon inspection look indolent, the method suggested and practised by Blake, fitting a small sterilized piece of very thin paper over the opening existing, will often heal these perforations, if in no other way than by the mechanical irritation set up by their contact with the indolent surface. In applying these paper discs, after they are approximated closely to the drum membrane, they are gently pressed around their edges so as to adhere firmly. After they have been satisfactorily approximated, a small amount of powdered acetanilid or boric acid is dusted over their surface. Such a dressing will remain in place from two to eight days, and when the parts are again inspected we find the disc, though still adherent to the drum membrane, has gradually worked toward the edge of the drum, exposing a part or the whole of the perforation, while little or no moisture is present. A second disc, sterilized in the same manner, is now placed over the opening, leaving the primary one undisturbed, and partially overlapping it. Usually two or three such applications serve in a large number of cases to completely stop the discharge and close the opening. The protection given by the disc, no doubt, hastens the changes taking place in the pathological mucous surface of the middle ear.

To improve the hearing after we have cured the discharge is the next step in the treatment of this disease. When marked destruction of the tympanic membrane has taken place and the ossicles are bound down by adhesions, we usually get a marked diminution in the function of hearing, unless we later divide the adhesions existing, and this procedure can be quite easily carried out after the discharge has ceased, and will be followed in many cases by a decided improvement in audition. Some of the cases thus subsequently operated upon show no improvement, but the large majority do improve, and for this reason we should not fail to give this part of the treatment a fair trial. Personally I have seen only two cases out of a total of twenty-four that did not improve under this procedure.

It is usual in an ordinary case for the hearing to improve when the discharge ceases, and here as an aid to restoring the function of hearing we use the ordinary method of inflation and vaporization of the middle ear, as it prevents the excessive formation of adhesions, and when these adhesions have taken place, it tends to stretch them, as well as stretch and make more pliable that portion of the drum membrane still intact, and also exerts the same influence, to a greater or less degree, upon that part of the drum membrane which is forming anew.

This method of treatment should, if possible, be carried out three times a week at first, and, as improvement begins to take place, the frequency should be diminished, according to the indications present in each case. In many of these cases during their convalescence, and after the discharge has ceased, there will be complaint made of a most distressing tinnitus, and one which does not clear up even though the frequent inflations spoken of have been practised. Here the administration internally of small and gradually increasing doses of the potassium iodide will be followed by a marked relief in a large number of cases. Begin with five grains three times a day, gradually increasing the dose until the relief is secured. Usually when the patient has taken about ten grains three times a day for several days, this symptom will gradually diminish, and in a fair number of cases will disappear altogether. Its action no doubt is due to its stimulating properties, and this causes an

absorption of a small amount of exudate or recently formed deposit within the middle ear.

If any decided labyrinthine involvement is already present, then, of course, the severing of the adhesions above spoken of is contra-indicated from the standpoint of any improvement.

In all cases in which upon our first examination we discover intratympanic caries existing, it is useless to attempt a cure of this condition except by an operation on the middle ear for the removal of this pathological condition, or when a case has been systematically and persistently treated over a period of from three to four weeks, with little or no improvement, a most careful examination with the probe should be made under cocaine anesthesia; usually we will find an area of carious bone as the cause of the continuance of the symptoms.

When caries is found we then have the choice of its removal through the canal, or by the opening of the mastoid process and doing a Swartz-Staacke operation. If the case be one in which there is no evidence of a mastoid involvement either past or present, it is much better to remove the caries through the canal and not subject the patient to the unpleasantness of a prolonged convalescence as well as an unsightly scar for the rest of his life. The caries can always be removed through the canal, care being taken not to injure the facial nerve, and the canal packed with plain sterilized gauze, removed each day for three or four days, and replaced; after this the ear will need to be irrigated only once or twice a day for a week or ten days, and in two weeks from the time of the operation we should have a case in which the discharge has ceased and one requiring only a slight amount of care and treatment to improve its functions.

Should there be any evidence of mastoid involvement at the time of operation, by no means should we operate through the canal, but by the posterior method.

Regarding the prognosis for hearing in these cases, we should never promise them that the hearing will be improved, but that it will be as good as before the operation, but clinical experience teaches us that a few do improve markedly, but they are usually in patients who are under twenty-five years of age.

In all cases coming under our observation for treatment, we should never lose sight of the fact that we are medical practitioners first and specialists second, and all cases, when indications demand it, should have general building up and tonic treatment in order that the local condition may improve the more rapidly. This will result if the patient receives a surplus of nutrition through the medium of the general system, and many cases which to-day are chronic, had they had the building-up process when first attacked by the local disease, would never have been prolonged into this less hopeful stage.

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TUBERCULOSIS OF THE IRIS.

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TUBERCULOUS affections of the eye, especially of the iris, the ciliary body and the choroid have claimed the attention of the medical world much more of late than formerly. The true nature of affections of this kind has been known only for the last thirty years, and yet there are many interesting cases of this kind on record.

The close connection of diseases of this kind with pulmonary or general tuberculosis makes their early recognition a matter of supreme importance, and great credit is due to efforts of many European writers, such as Leber, Schieck, Langhans, Cohnheim and others and to Dr. Chas. Bull of this country for their researches in regard to the true nature of these dangerous diseases of the eye.

Tuberculosis may affect, of course, nearly any part of the eyeball, yet the iris and the choroid are much more frequently invaded than any other part of this organ and affections of the former will claim our attention especially to-day. The starting point of the tuberculous iritis may be in the iris itself or in the ciliary body or the choroid, but very soon it spreads from the one to the other and the entire eyeball or at least its inner parts are apt to become involved. It is sometimes a primary, but usually a secondary affection and may be divided into two classes, the solitary and multiple form, and the latter may be divided again into an acute and chronic kind. This division is partly due to the number of tuberculous deposits to be found in the iris, partly to the clinical difference of the attacks and partly to its connection with tuberculous affections of other parts of the body.

As a rule, it is a disease of youth or early middle life and only one eye is affected in nearly every instance, in which respects it differs from tuberculous affections of the choroid, which as a rule, are of the miliary form and attack both eyes at the same time. The first class to be described comprises those cases which are usually connected, more or less directly, with tuberculous disease of the general system, not necessarily of the lungs however, but may be associated with tuberculous affections of the meninges, the peritoneum or the kidneys. The disease generally assumes a more or less acute form at once, as characterized by the formation of one or more grayish nodules developing in the iris tissue, consisting of inflammatory products with a small number of bacilli and is marked by the early appearance of ciliary injection and is accompanied by intense pain in the eye and forehead; many synechiæ form; the eyeball becomes

red and painful to the touch and the disease resembles in many respects an acute attack of rheumatic or specific iritis. But the tuberculous deposits, which were in the beginning like small, grayish bodies, soon become larger and more vascular and appear of a reddish-brown color. They are apt to coalesce and eventually break down, forming a large, soft, brownish mass projecting into the anterior chamber. The pain is often so intense that an enucleation of the eye may be called for on this account alone. The vision becomes impaired early and the pupil fills up with exudative matter, and firm adhesions of the iris to the lens form early in the course of the disease. The aqueous humor is cloudy and mixed with broken down tuberculous matter. If the disease is not interfered with the cornea may break down on account of contact with the tuberculous deposit and a large ulcerating surface with numerous blood-vessels in it is formed. These may give rise to hemorrhages and discharge considerably. The entire eyeball becomes filled with tuberculous matter and even the orbital tissues may become involved; on the other hand, a shrinking of the eyeball may take place after the perforation of the cornea. This form, therefore, even in milder cases results in great impairment or total loss of vision or in destruction of the entire eyeball, and not infrequently the death of the patient is brought about by similar simultaneous attacks of the meninges, or lungs, or by a direct extension of the disease to the brain.

Another form of tuberculous disease of the iris, which is not so violent in its onset, and in which there are probably not so many bacilli present in the deposits, occurs usually during the earlier stages of pulmonary tuberculosis. It is characterized by the appearance of multiple, generally more than one or two, tuberculous deposits in the iris. This form is accompanied by some pain and photophobia and more or less invasion of the pupillary border of the iris, which in turn leads to the formation of the posterior synechiæ.

This disease, which was first described by Leber, runs a much slower course than the first form. It may last for many months, and the iritis may be entirely relieved if the general condition of the patient improves, or it may result in occlusion of the pupil with eventual shrinking of the eyeball. These tuberculous deposits are usually isolated, yellowish in color and they rarely coalesce; they become vascular after some time and may remain in this shape for a long period. Sometimes absorption of the nodules appears to take place and, if the pupil remains well dilated during the course of the disease and is free of inflammatory deposit, the eye may retain a fair amount of vision. There is usually but little ciliary injection and not much change in the appearance of the eye during the course of the disease.

The third form is a more serious one and usually leads to great impairment of vision or loss of the eyeball. It manifests itself in the shape of a single tuberculous deposit, situated at the bottom of the anterior chamber, projecting into the aqueous humor, and involves the ciliary body frequently from the onset. It is very painful from the beginning and is associated with photophobia and lacrimation. Adhesions of the iris to the lens are most frequently found at the lower half of the pupillary border; later the pupil becomes narrow and is often occluded by exudation and this naturally results in great impairment of vision. The pupil may eventually yield to the action of strong solutions of atropine, but the lower half of it is usually firmly adherent to the lens. As the tumor develops it presses on the cornea, which in that case will soon break down. This will lead to the loss of the eye. The eye, as a rule, will have to be enucleated, but sometimes it may undergo a phthisical degeneration. However, even this form of the disease, which usually affects young people at the age of puberty, or during childhood, may sometimes yield to treatment, and partial recovery of the sight may be obtained.

It may seem strange that in all the cases which come under my observation the left eye was always the diseased one, but this seems to be the experience of other observers likewise; nor have I seen a single case in which the disease attacked both eyes at the same time, not even in the form of a sympathetic ophthalmia. Of course this does not refer to cases of miliary tuberculosis of the choroid, which as a rule attacks both eyes, usually at the same time.

The treatment of affections of this kind should be directed to the tuberculous condition of the system in the first place, and here the usual remedies, for instance, creosote in large doses or the use of Koch's tuberculin would recommend themselves to us. But on account of the iritis or iridocystitis, which is nearly always present, the most energetic treatment for this complication must be promptly resorted to and here the use of an atropine solution, four or six grains to the ounce of water, is of the greatest benefit, as it not only tends to relieve the intense pain and the photophobia, but also leads to a dilatation of the pupil and prevents the filling up of this space by exudation. This in turn helps to retain some vision to the eye during the attack and lessens the danger of great impairment of vision should the patient ultimately recover from the disease. Ice-compresses are not always grateful to the patient and as a rule hot water applications give more relief. Especially is this true when the cornea becomes involved during the course of the disease. Leeches to the temporal region are usually not indicated, because the patients are apt to be in poor health and cannot afford to lose any great amount of blood. Yet in acute or rapidly progressing cases, especially if associated with meningitis, the use of three or four leeches applied to the temporal region may relieve the intense pain and congestion of the eye. Even morphine may be given if the patient is in great pain and if very restless at night. On account of the

local use of rather strong solutions of atropine to the eye, of which more or less is absorbed, fairly large doses of morphine may be given with impunity, even to children.

In regard to operative treatment, an iridectomy, including the tuberculous deposit, may be thought of, if the latter is confined to only a small portion of the iris and the rest of the iris-tissue is in fairly healthy condition. But even under these favorable conditions the prognosis should be very guarded, as the disease may reappear shortly after the operation and lead to a rapid destruction of the eye. If there is any broken-down tissue present in the anterior chamber this should be carefully washed out at the time of the operation by means of a very mild solution of bichloride of mercury; but this fact, that the contents of the anterior chamber have become infected, should be a caution not to operate at all. It is therefore a safe rule that, if the tuberculous iritis does not show any signs of improvement after the usual internal and local remedies have been tried, and especially if the disease appears to be progressive in spite of them, the complete removal of the affected eye must be resorted to. Even if the enucleation of the eye does not always prevent an infection of other organs of the body, yet it may at times save the life of the patient by removing the principal cause of danger; even if other organs of the body are already affected and the chances of saving the life of the patient be very slight, the removal of an eye, blind from the effects of the tuberculous disease, may be called for, if the pain is very severe and robs the patient of sleep and strength.

I here present the histories of three cases which I have seen in succession in order to illustrate the three forms just described.

Case I.—Mary N., nineteen years of age, living on Staten Island, had a very sore left eye for which she was treated by a colleague, who had recognized the disease and had advised the removal of the affected eye. This procedure, however, was strenuously objected to by the entire family, including the patient. I saw the case a few weeks later. The patient had been obliged to go to bed and I found her in a greatly debilitated condition, with fever and indications of a beginning tuberculous meningitis and an invasion of the lungs, probably of a miliary type; the apices of both lungs being involved. The eye itself was intensely inflamed and she suffered the most agonizing pain day and night. Photophobia was very marked; she had to be kept in a very dark room. The cornea was a little hazy and in the iris tissue three moderately large deposits of light yellowish appearance, with some vascularity, were found; the pupil was irregularly dilated, and partly filled with exudation and there was no perception of light. This latter fact and the intense suffering of the patient made it desirable to remove the eye, which was done under ether. The patient felt greatly relieved after the removal of the eye, as the local attacks of pain had disappeared, but the meningitis ran its usual course and in a little more than a week the young girl died of tuberculous meningitis. The formations seen in the iris of the enucleated eye proved to be tuberculous deposits.

Case II.—A young man about twenty-three years of age. His eye became badly inflamed during a stay in the Berkshire Hills, where he had gone on account of an annoying and debilitating cough which had troubled him during the spring of 1899. The case was seen by an eminent specialist in the neighborhood and was later, on his return to the city during the latter part of the summer, referred to me. The left eye showed signs of an old inflammation and in the iris tissue four small, yellowish deposits could be seen. There was a mild form of iritis which had evidently existed for some time, for there were not only several synechiæ but also some small brown deposits on the anterior surface of the lens where former adhesions had been torn loose. The sight of this eye was fairly good $= {}^{20}/_{70}$; that of right, not implicated eye was about normal. The ciliary injection was not marked and the pain had never been very great. The patient denied all specific trouble of any kind and the disease had not been affected by large doses of iodide of potash. There was dulness of the apex of the right lung and I ordered creosote and cod-liver oil after the futility of the iodide treatment had been shown. The eye improved considerably shortly after this and the patient went back to the mountains. Two months later he returned on account of a slight relapse of iritis, but this improved after the usual local treatment had been instituted and his sight improved to ${}^{20}/_{40}$. The pulmonary trouble was not very bad and the patient was of a cheerful and hopeful disposition which was evidently greatly in his favor. He went out of town again and I have not seen him since. At the time of his last visit the tuberculous deposits of the iris were perhaps a little smaller and the iritis had subsided promptly after the usual treatment.

Case III.—The last case was that of a young Italian lad, about twelve years old, who had been treated at some of our dispensaries for several weeks on account of a badly inflamed left eye. The boy was rather pale and anemic and all the glands of his neck were very much enlarged. He suffered from intense pain and photophobia and the eye was very much injected, especially around the lower half of the cornea. This latter part of the eye was fairly clear, but the aqueous was a little hazy; the pupil was partly under the influence of atropine and the upper part of it was free and dilated. but the lower half was firmly adherent to the anterior capsule of the lens. The iris was somewhat discolored and from the bottom of the anterior chamber a small, narrow tumor projected upwards into the anterior chamber. It was yellowish brown in color and surrounded by some blood-vessels at its base and was perhaps two to three m.m. high and one to two m.m. broad.

The patient was brought to me because it had

been proposed at the hospital to remove the eye. After the energetic use of atropine, the pupil began to dilate even below, having only two firm adhesions which could not be torn, and on the anterior as well as on the posterior lower half of the lens an opacity was revealed which was evidently due to inflammatory deposits of the iris and ciliary body. The posterior opacity ran up almost as high as that on the anterior surface of the lens. As the upper part of the iris appeared fairly normal and the vision of the eye proved to be like $^{20}/_{200}$ after the full dilatation of the pupil, and as the interior of the eye was fairly clear and the optic disc, as far as could be seen, was apparently normal, I decided to resort to medical treatment before operating and ordered a strong solution of atropine locally and ten drops of creosote in cod-liver oil three times a day and a generous meat and milk diet. I did not see the patient for two weeks after this and by this time a great change for the better had taken place; the tuberculous deposit, for such I took it to be, had shrunk considerably, and the posterior synechiæ were very much thinner. After two more weeks there was hardly any trace of the growth visible, but the synechiæ and the deposit on the anterior and posterior lens-capsule were still present. There was no pain and no photophobia; the glands of the neck were less swollen and the general health of the child was very much better and he had discarded the dark glasses I had given him. Of course there is some doubt as to the true nature of the disease as long as no inoculations of the suspicious deposits on rabbit's eyes were made, but as idiopathic iritis in children is so extremely rare and as the mother of the last patient had died of phthisis and as the action of creosote appeared to be so very favorable, and as there were no signs of either acquired or congenital syphilis, and as there was no history of any injury or rheumatism, the tuberculous nature of the disease was more than probable, in spite of its favorable termination.

MEDICAL PROGRESS.

Biological Determination of Human Blood.—A. DIEUDONNÉ (*Münch. med. Woch.*, Apr. 2, 1901) injected blood obtained from human placentæ, strongly albuminous urine and pleural exudate subcutaneously in gradually-increasing doses into rabbits. Several days after the final injection, venesection was done and the serum tested with small quantities of blood from various sources. Only in the case of human blood a distinct, flocculent precipitate could be obtained. It differed little whether the serum was obtained from the rabbits treated with blood, urine or pleural exudate.

Perforation in Typhoid.—This accident may be divided into two stages, the perforation itself, and the consecutive peritonitis. A majority of the cases occur early in the third week. After citing three cases of laparatomy for perforation, with recovery in one case, death during operation in another, and in the third a healthy bowel wound but subsequent death from toxemia, WILLIAM OSLER (*Proc. Phila. Co. Med. Soc.*, Feb., 1901) throws out the time-honored picture of perforation, the Hippocratic facies, the feebly running pulse, the profuse sweat, distended, motionless abdomen, as that of peritonitis and an omen of death. That perforation may be recognized early enough for surgical aid, he directs the nurse to give notice of any complaint of abdominal pain, hiccough, vomiting, sweating, rise of pulse or respiration, or signs of collapse. The physician should note whether the pain is an aggravation of slight abdominal pain, or sudden, intense, and, though relieved by stupes and ordinary measures, recurring in paroxysms and growing worse; whether diffuse or localized, in hypogastric or right iliac region, and its radiation (as to penis in one case at Johns Hopkins). Abdominal pain of severe character may mean acute pleurisy, cholecystitis, distended bladder, packed rectum, or may follow an enema. Note whether abdomen is flat, scaphoid, or distended, and if the last, whether uniform or chiefly hypogastric. Are the respiratory movements present, uniform, and seen both below and above the navel? On palpation, note the tension, tenderness, locality and extent and degree of pressure necessary to elicit muscle rigidity and spasm, absence or presence especially in hypogastrium and right iliac fossa. On percussion note whether liver-flatness is diminished even in a flat abdomen. On auscultation listen for friction-sounds, or obliteration of peristaltic signs. Examine rectum for tenderness and for fulness between rectum and bladder, and note character and frequency of stools and presence of blood or sloughs. The facies may show a changed expression, slight or marked risus, pallor, sweating, etc.; the pulse may change in rhythm, rate, and force. Note whether temperature drops or not, whether respiration suddenly increases or becomes infrequent, whether shallow or sighing. The leucocytes should be counted every hour and are either stationary or rising. The red-cell count and hemoglobin will distinguish from hemorrhage. These points noted make the diagnosis possible in many cases, and then no time should be lost in giving the patient the benefit of operation. As typhoid patients bear operation well it is better to err in favor of surgery than to let valuable time be lost in waiting for further confirmatory evidence.

Fracture Bandages.—F. BAHR (*Centralbl. f. Chir.*, No. 12, 1901) considers the following little technic exceedingly valuable in preventing displacement of fragments within the plaster-of-Paris splints after reduction has once been made. While one assistant makes the extension and after the fragments are apposed, another assistant passes loops of rather wide bandage about the limb, one just above and a second just below the point of separation. Having taken the ends

of each loop in either hand he gently makes traction in opposite directions in the plane of greatest former displacement. This maneuver holds the bone-ends together while the plaster-of-Paris bandage is carefully applied. A window is necessarily made at the points where the slings above described emerge, which are later bridged by wooden splints over which the ends of the loops are tied, each on its own side maintaining the pull. In this manner all tendency toward recurrence of the deformity is checked. The procedure has one hazard, which is easily avoided if a little care is exercised, it is that of making the ties too tight over the soft parts. After an extended application of this plan he has never seen any such difficulty arise.

Ox-Serum in Rectal Feeding.—O. GRUNBAUM (*British Med. Jour.*, Apr. 6, 1901) outlines some of the advantages to be obtained from this form of alimentation. His observations have been on women, gastric ulcer being present in a number of the cases. Starting with the proviso that the patient must have the equivalent of about 2,000 calories, he has proceeded by a very careful series of observations to show that from ox-serum in minimum doses she absorbs the maximum nourishment. She requires about 85 grains of proteid, 40 of fat and 320 of carbohydrate. To the serum he adds glucose and milk, with liquor pancreaticus. Some of the advantages of the serum are its constant amount of proteid, its small cost, the ease of its preparation and the odorless character of the stools. His formula, given every four hours, is as follows: Serum, 90 c.c.; milk, 60 c.c.; glucose, 15 gm.; liquor pancreaticus, q. s. By giving a cleansing enemá just prior to each injection, he has been able to note the relative rates of absorption. Fat is not taken up kindly by the colonic and rectal mucous membrane; starches or glucose are readily assimilated and, if not stronger than 15 per cent., are well retained and do not irritate. The heat of this diet is 578 calories. He increases it 300 calories by the subcutaneous injection of sterilized olive oil, from 30-40 c.c. being given daily. By these methods he finds the loss in weight can be reduced to 750 grains a week.

Arteriosclerosis and the Heart.—The cause of arteriosclerosis in young or middle-aged people may be due to the influence of heredity so that the arteries prematurely show their tendency to degenerate. B. ROBINSON (*N. Y. Med. Jour.*, Apr. 27, 1901) further believes that it is not necessary to find alcoholism, gout, lead or syphilis, as a causative factor, but continuous overwork, poor assimilation of food and irregular habits of life may also be determining factors. Renal disease may be only secondary, but is frequently, no doubt, a direct cause. It is in this diffuse form among middle-aged vigorous men that we find the greatest degrees of cardiac hypertrophy. Senile changes rarely cause hypertrophy of any degree. The essential change is in the small arteries where a thickening occurs due to the hyaline degeneration of the muscular layer. In mitral stenosis a sclerotic condition of the pulmonary veins is not uncommon. High tension may exist without sclerosis, but it is then variable. When it exists in a continuous persistent manner it is usually due to sclerosis. While heart stimulants, as strychnine, strophanthus and digitalis, are often indicated, potassium iodide in moderate doses for long periods is the most useful drug and should be prescribed with occasional interruptions.

Tobacco and Glycosuria.—Very little is said in works upon diabetes about the causative relation which tobacco holds to glycosuria. H. STERN (*Med. Rec.*, Apr. 27, 1901) has reported four cases in which this influence was carefully watched. By experimentation it was found that the use of from five to ten cigars during the day would increase the glycosuria at least from one to two per cent. In one case in which a percentage of 1.35 continued under an antidiabetic diet, the cessation of the free use of tobacco resulted in a permanent disappearance of glucose from the urine. Nicotine is not believed to be the offending agent for nearly all of it is decomposed by heat. As the empyreumatic compounds and acrid substances have their chief influence upon the mucous membrane their importance in this connection is also considered slight. Carbonic oxide gas is here thought to be the most poisonous matter contained in tobacco smoke and largely responsible for the mellituria. The amount of CO evolved is not only dependent upon the quality of the tobacco, upon its moisture and combustibility, but also upon the mode of manufacture and consistency. Pipes do not seem to be so injurious for oxidation is here more free. In non-lethal CO poisoning the glycosuria lasts only a few days and the sugar excreted does not usually amount to more than 1.5 per cent. When resulting from the use of cigars the glycosuria persists as long as the causative factor continues.

Extreme Simple Anemia.—A very marked case of simple anemia is reported by R. FLOYD and W. J. GIES (*Med. Rec.*, Apr. 27, 1901) in which the blood showed upon the first examination: Hemoglobin, 12 per cent.; red cells, 750,000; white cells, 3,300. The principal symptoms were dyspnea, with attacks of palpitation, vomiting, diarrhea and sometimes edema. She was started on sulphate of iron, gr. xxiv, and arsenious acid, gr. $^1/_{10}$, in twenty-four hours. Her symptoms very rapidly disappeared and at the end of the fourth week the hemoglobin was 45 per cent.; red cells, 1,568,000; and white cells 5,600. The variation in size and shape which was so noticeable at first had almost entirely disappeared. At the end of the ninth week, hemoglobin, 97 per cent.; red cells, 3,796,000; white cells, 7,000. The ferrous sulphate was increased to grs. xxxix during the latter part of the illness and seemed to be very well borne. Another case which proved to be pernicious anemia is compared with the above. The analysis of the

blood showed hemoglobin, 22 per cent.; red cells, 756,000; white cells, 4,800. Only one normoblast was found and the poikilocytosis was not more marked than in the first case. In spite of energetic treatment she died within one week. The analyses of the blood in these two cases were very similar and from these alone diagnosis would have been impossible. The clinical features which were significant were, the age of the first, nineteen; of the second, sixty-four; no cachectic color in the first, marked in the second; a rapid response to treatment in the first, no response in the last.

Treatment of Penumonia in Children.—It is believed by L. FISCHER (*N. Y. Med. Jour.*, Apr. 27, 1901) that pneumonia may sometimes be aborted by the use of one-drop doses of aconite repeated every hour for six doses, with spiritus mindereri hourly until diaphoresis occurs. Calomel should be given in small, frequently repeated doses till liquid stools are passed. Water should be given freely for the diaphoretic and diuretic effect. Antipyretics should seldom, if ever, be used. The cold tub or pack is especially valuable and for stimulation to the skin and heart the cold tub may be advantageously alternated with a warm bath. Vigorous rubbing should be kept up. Oxygen should be freely given in the form of fresh air and, if drafts are prevented, it is much better to have the windows opened. To relieve a hacking cough and give sleep, codeine in doses of one-tenth of a grain may be used if necessary, but should not be repeated often. Feeding is an essential element in the treatment, especially in the prolonged bronchopneumonia cases and the addition of a small amount of whisky is thought to be of assistance.

Bovine and Human Tuberculosis.—Having noted the excess of virulence of the bacilli of bovine tuberculosis over those of human origin, R. R. DINWIDDIE (*Bulletin* 63, *Arkansas Agricultural Experiment Station*) performed experiments with the following results: Cultures from human sputum caused in pigs a chronic tuberculosis with emaciation. Cattle proved very resistant and in no case was a progressive or even permanent infection obtained. Sheep were more susceptible than cows as evidenced by persistence of the tuberculin reaction and larger local lesions, but suffered no impairment of general health. Toward cultures of bovine origin all three species proved highly susceptible. The writer concludes that stabling, as it causes the breathing of vitiated air, may account for the increased susceptibility of these animals to the naturally-acquired disease, over their susceptibility to inoculation.

THERAPEUTIC HINTS.

Diabetes Mellitus.—If sugar continues in the urine even in abstinence from all carbohydrate food, including milk, says GEORGE DOCK (*Physician and Surgeon*, Mch., 1901) the case is severe and the food must be increased to prevent inanition. Some starchy article, such as bread or potato, may be added in small quantity, gradually increased. If there is a large amount of sugar, carbohydrates must not be cut off suddenly, but gradually for two or three days; if the sugar is small in amount the carbohydrates may be stopped at once. Then gradually ascertain the tolerance for bread, potatoes, other vegetables, sugar, beer, etc., so that the dietary may be made as wide as possible. Milk (not skim milk), fat in all forms (as cream, bacon, oil, butter). Cheese, etc., can be used with great advantage. When there are evidences of intoxication foreboding the dreaded coma, give at once large doses of alkalies, as much as 13 grams (200 grains) daily. Small doses meet with failure. Some should be given intravenously as well as by mouth.

Syphilis.—VERRIER reports the use of the serum of Jeltschinsky of Moscow, which is not of the nature of an antisyphilitic serum, but which seems to modify and stop the inroads of syphilis. He has met with much success in fifteen cases, one of them a case of pregnancy, with both father and mother seriously infected, and in which under these inoculations a non-syphilitic child was born.—*Le Progrès Médical*, Mch. 23, 1901.

Hyperemesis of Pregnancy.—J. W. MCLANE advises complete rest, in bed, have all food given by the nurse, and keep patient's mind away from the stomach. Matzoon, c.c. 4.0-8.0 (℥i-ij) is easiest borne, then gradually add peptonized milk, beef tea, preferably unsalted, eggs, and raw oysters. An enema containing tincture of opium a few drops, and brandy 4 c.c. (℥i) is good. Examine the uterus and if anteverted or retroverted or bound with adhesions, tampon with boric-acid vaseline or glycerin gauze. If the vomiting cannot be stopped anesthetize, scoop out ovum with the finger, curette, douche, and insert a gauze drain.

Intertrigo.—The opposing surfaces must be separated by lint, the furrows kept clean, and all freely dusted with starch, talc, lycopodium or other powder. Zinc oxide, boric acid, or other astringents may be added, especially compound stearate of zinc. As a rule, powders are better than ointments. Lassar's paste or lotions such as calamine lotion, or saturated solution of boric acid may be used.

HARDAWAY recommends:

℞ Thymol. .....gm. 0.06 (gr. i)
Pulv. zinci oleat. .... 30.0 (℥i)

In infants the treatment is that of eczema. The breast-milk or other milk must be investigated, and water must be kept from the skin. In male children a tight prepuce may cause dribbling of the urine with constantly wet diapers. Cod-liver oil is often a good internal remedy.—*G. T. Jackson in "Diseases of the Skin."*

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A WEEKLY JOURNAL

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SATURDAY, MAY 25, 1901.

THE REORGANIZATION OF THE AMERICAN MEDICAL ASSOCIATION.

FOR a number of years past it has been becoming very apparent that the American Medical Association under its present Constitution and By-laws is an extremely ill-knit and unwieldy body. The crudity of its early construction is now too manifest and the recent steps of the committee of reorganization are deserving of special consideration.

The two greatest integral faults with the early plan of organization have been the method of delegate representation and the lack of a coherent scheme of allied associations in the several States. The number of delegates has been too many, business affairs, medical politics and medical legislation have been in large part ineffectual, because of the unwieldly character of this body and the heterogeneous character of the affiliated societies has prevented anything like a comprehensive and coordinate association with a unity of ideas and purposes.

To obviate the confusion caused by the number of delegates the Committee proposes the establishment of a House of Delegates. This body is to undertake the business of the Association and is to consist of members from the State Association, the apportionment being one member in the House for 500 in the State Association. Inasmuch as there is thus far no regularity concerning State associations the committee outlines a plan of organization by which the county associations become the integral parts of the State Association without any increase of dues.

We cordially endorse the report of this committee and believe that a way is offered by which the A. M. A. may be made a more representative body which shall deserve the respect of the entire medical profession. By the general terms of the report many of the objectionable elements, especially those relative to the politics of the organization, will be eliminated and we second the hope of the Committee of Organization that "If the Association will give its sanction to these recommendations, there will be good reason to hope that in five years the profession throughout the entire country may be welded into a compact organism, whose power to influence public sentiment will be almost unlimited, and whose requests for desirable legislation will everywhere be met with that respect which the politician always has for organized votes. With the Association in constant, personal, definite, and essential touch with each State medical society, and through them with the societies in every county, the profession of medicine can at no distant day demand and receive that respect from lawmakers, from government officials, and from the general public to which it is admittedly entitled by reason of its ideals, its education, and its power for doing good to all mankind."

LIFE INSURANCE AND CHRISTIAN SCIENCE.

AT the instance of a correspondent the MEDICAL NEWS wrote to all of the regular old line life insurance companies, asking what steps, if any, had been taken with reference to the acceptance of risks of individuals who professed to believe in the unadulterated doctrine of Christian Science. Further what was going to be their attitude toward the claims of those dying in the faith. With but few exceptions the companies have maintained a discreet silence.

While we may not be interested in what happens to the individual who pins his faith to the doctrine of the non-existence of disease and pays the penalty which nature metes out with relentless irony to all those who ignore

the general laws of experience, it is important that the insuring public and more particularly, from our own point of view at least, the physician, should know in what manner the Life Insurance Companies intend to protect his interests by a careful scrutiny of its risks. Bad risks, if accepted by such companies, mean diminished returns on an insurance investment and since the protection of its policy holders is the foundation of any company's success some expression of opinion on this point is their duty.

It is therefore a sign of awakening on the part of insurers to the importance of the situation that a mutual benefit association in New Jersey has taken radical steps to protect its more enlightened members.

"In denying insurance to the dangerous fanatics of whom the 'Christian Scientists' are the best known variety," says the *Times*, "the New Jersey Grand Council of the Royal Arcanum has taken a stand that is open to criticism only because it was not taken long ago. Every other organization of the same character ought instantly to imitate the example thus set, and delay in doing so simply subjects to unjustifiable risk the property rights of the sane members of the societies. 'All persons,' to use the words of the resolution adopted by the Grand Council in explanation of its course, 'who reject, refuse, or neglect the aid of medical science are a very dangerous risk from an insurance standpoint.' That is an unquestionable truth, clearly stated. Since the 'Christian Scientists' deny the existence of disease and of death itself, the commonest sort of consistency demands that they voluntarily get out of the mutual insurance organizations, allow their policies in the regular insurance companies to lapse, and carefully refrain from stultifying themselves by taking out any new policies. If they will not do this—and of course they won't, as consistency is something they know nothing about—compulsion should be applied exactly as the Royal Arcanum has applied it. A little discipline of the same sort, used in this and other directions where it is needed, would tend to bring back to their senses all the believers in 'faith cure' except those whose insanity is irremediable, and there are not many so far gone as that. The follower of any one of these delusions is not a safe person with whom to have either business or social relations. The means of applying pressure are numerous, and as soon as sensible people begin to utilize them 'Christian Science' and all the allied or identical humbugs will be dissipated as rapidly as are other filth-laden miasms by the attack of good fresh breezes."

We feel that we can add little to the expressions here quoted but we would like to compel the regular insurance companies to enunciate the stand that they have decided to take in this matter. A concerted inquiry from physicians and particularly those contemplating the purchase of new policies would undoubtedly bring about an expression on their part as to how they are going to protect our interests.

PANCREATITIS: ITS ETIOLOGY; SYMPTOMS; TREATMENT.

THE paper of Mr. A. W. Mayo-Robson of Leeds, England, merited all the wealth of applause it won the author at the recent meeting of the American Surgical Association in Baltimore. Outlining, as it did with the utmost clearness, the pioneer work of this great surgeon on an organ which is virtually the last of the abdominal viscera to surrender its virginity, so to speak, to the exploring knife, it marks the crest of the last great wave of surgical progress in this region.

Mr. Robson considers two factors as of ultra importance in the etiology of pancreatitis. The first, and by far the weightiest, is infection ascending by way of the duct, the second depends for its import on the excessively delicate network which holds the gland together. This is infinitely frailer than the corresponding stroma of the parotid, and, albeit the pancreas is so deeply and so centrally placed, there can be little doubt that abdominal blows of the very mildest character often wound the organ sufficiently to create the gravest kind of inflammations.

As yet, there are no pathognomonic symptoms of pancreatitis. Clinically, in the absence of tuberculous infection the most constant although by no means an invariable sign is the well-known extraordinary loss of weight. This takes place, in the classic cases, with appalling rapidity. Glycosuria and lipuria are occasionally present, although sugar does not appear early enough to have any diagnostic value, and, apparently, but very slight traces of the fat which accumulates in the body because of disordered pancreatic action are voided in the urine. The more natural channel for this unassimilable fat is the bowel, and clay-colored stools are far more significant of pan-

creatic than of choledochic involvement. The so-called "fat necrosis," a very general fatty change of macroscopic character which often invades organs as far distant from the pancreas as the heart and which was formerly considered pathognomonic of pancreatitis, has been shown to occur frequently, and to the same degree, in other diseases.

But if still in the dark so far as the clinical signs go, it seems very probable that ere long the results of pathological chemical study will afford means of an early and certain diagnosis of pancreatitis. When the urine of these cases is treated with phenyl-hydrazin, apparently so far without exception an abundance of singularly grouped rosetted yellow crystals is obtained. Mr. Mayo-Robson does not yet know their composition but he has found their presence of great value in establishing a differential diagnosis between simple catarrhal jaundice and icteroid pancreatitis.

Whatever may be the status of our ignorance in diagnosing pancreatitis, there is now no longer any question as to the treatment. It is both medical and surgical. Contrary to the too usual state of affairs, we know what to give, how much to give and why to give, calcium chloride. The degenerating fat in the body splits into glycerine and fatty acids—these acids unite with the calcium of the blood, which destroys, or limits, its power of coagulating. Hence calcium chloride in heroic doses is indicated especially in the hemorrhagic form. This term Mr. Mayo-Robson feels has been used too promiscuously. Inflammatory conditions of the pancreas are to be classified like those of any other organ, into chronic, sub-acute and acute. The hemorrhagic form is now to be considered a variety of the acute. The surgical treatment is immediate operation with the establishment of drainage. The position and direction of this varies with the chronicity or activity of the case. If it is of long standing, it is best accomplished indirectly by way of the marsupialized gall bladder; if acute it is through a retro-abdominal incision leading to the fat of the left perinephric region.

THE SUPPORT OF HOSPITALS.

THE problem of how to pay the running expenses of a hospital confronts even the wealthiest institutions in the city. Legacies, gifts and endowments are pouring in, but only the interest goes to current expenses, and as the scale in which these expenses increase is simply enormous, in spite of careful management, in spite of balls, concerts, fairs, bequests and annual dues of members a deficit of from $10,000 to $70,000 may reasonably be looked for each year in the treasurer's report.

Inquiry at the offices of four of the largest hospitals in New York the other day, namely St. Luke's, Presbyterian, the German and the Roosevelt Hospital brings out the fact that the deficit in the Presbyterian was $77,364.32, St. Luke's $62,043, while the German and Roosevelt each were about $11,000 behind. Certainly the private patients pay well for their care, and it is not to be expected that the poor can give more for their nursing than they do, and yet it looks as though every patient were practically the recipient of the charity of the trustees who annually put their hands in their pockets and make up the deficit.

Viewed from the standpoint of strict economy, there is no valid excuse for marble halls, swarms of servants, silver service and the luxury of perfected details. But viewed from the standpoint of science, the hospitals that are training the best physicians and nurses that the city can supply, are doing something more than caring for the individual sick man. They are combatting the disease of a nation; and the few thousands given as charity are the best investment for the city's present and future health that can be made. In these days of luxuriously appointed steam yachts, enormous country houses, and elaborate entertainments it would be niggardly to deny to science and philanthropy any detail of perfection in the matter of plumbing, lighting, heating, apparatus, service and food, that the wealthy insist on having for their own comfort.

ECHOES AND NEWS.

NEW YORK.

New Building for the L. I. College Hospital.—A new building to replace the main structure of the Long Island College Hospital in Brooklyn, which was put up fifty years ago, is soon to be erected at a cost of over $175,000, of which about $120,000 has already been contributed. Henry W. Maxwell, it is said, subscribed $50,000. George Foster Peabody and Edward M. Shepard are also large contributors to the building fund.

Gifts of New York Hospital.—All the anatomical and pathological collections of the New York Hospital Museum have been given by the Governors of the hospital to the medical colleges of this city, the Post-Graduate Med-

ical College, the New York and Bellevue Hospital Medical College, the Cornell University Medical College, and the College of Physicians and Surgeons. These institutions arranged among themselves for the division of the collections donated. It was thought that as no lectures were given at the New York Hospital, and the museum was maintained only for exhibition to visiting doctors and others interested, the specimens could be used to better advantage in connection with the work of educational institutions.

Orthopedic Hospital Opens.—The New York State Hospital for the Care of Crippled and Deformed Children, which is situated in a remodeled house on a large tract of land on Paulding avenue near Tarrytown, on the Hudson River, was formally opened May 17th. The exercises consisted of addresses by Bishop Potter, who is President of the Board of Managers; Dr. Robert F. Weir of Columbia University, Prof. A. Alexander Smith of New York University, Prof. William M. Polk of Cornell University and William Rhinelander Stewart, President of the State Board of Charities. Bishop Potter in his opening address paid a high compliment to the work of Dr. Newton M. Shaffer, who was instrumental in getting the hospital ready to hand over unencumbered to the State. Dr. Weir said that this was the second hospital of its kind in the country. The first country to establish such a hospital at its expense, he said, was Russia. Dr. Weir explained that it was necessary to have such institutions in rural districts where the tendency to tuberculosis could be checked. The hospital has at present room for only about twenty-five or thirty patients, and eighteen are already there. Only children between four and sixteen years old who show some signs of being capable of improvement or ultimate recovery will be admitted. The Board of Managers consists of Bishop Potter, J. Hampden Robb, J. Adriance Bush, George Blagden, Jr., and Dr. Newton M. Shaffer. Dr. Shaffer will have the actual management. The consulting medical staff is composed of the professors of medicine and surgery of Cornell, the College of Physicians and Surgeons, the University-Bellevue Medical College, the medical department of the University of Buffalo, the Albany Medical College and the Long Island Medical College.

New Yorkers at the A. M. A. Meeting.—It is expected that Greater New York will be represented by more than two hundred physicians, at the annual meeting of the American Medical Association, to be held in St. Paul, Minn., June 4th to 7th. About half of these will take the special train which the New York State Medical Association has secured for the trip. This train will leave New York at 8.45 P.M., Saturday, June 1st, and stopping at various points along the line of the West Shore Railroad to pick up other members of the State Association, will reach St. Paul at 6.15 P.M. Monday. For those who will not go by this train, the New York Central offers an especially attractive table of fast through trains, and an excursion rate of one fare going and one-third fare returning, with stop-over privileges. From Chicago, the Northwestern road will run a special train of Pullman sleeping and buffet cars. This will leave Chicago at 7.30 P.M., arriving in St. Paul early Tuesday morning. The fare will be $13.50 for the round trip. This road also runs through expresses leaving Chicago at 9 A.M., 6.30, 10.00 and 10.15 P.M., on which reduced fare will be allowed. A considerable number of eastern physicians will leave to-day or early next week for the West, in order to attend meetings that precede that of the American Medical Association. New York members of the American Gynecological Society, which meets in Chicago May 28th to 30th, will go out on a special car, and will go to St. Paul next week to attend in that city the meetings of the American Association of Military Surgeons, May 29th to 31st, and of the American Academy of Medicine, June 1st and 3d. Nearly all of the New York and New England physicians, and many from other parts of the country, plan to make a brief sojourn at the Pan-American Exhibition at Buffalo a feature of the return trip.

PHILADELPHIA.

Jefferson Alumni.—The annual meeting and banquet of Jefferson Medical College Alumni Association was held May 14th at the Hotel Walton. The following officers were elected: President, Dr. W. W. Hartzell, Allentown; Corresponding Secretary, Dr. Henry Tucker, Philadelphia; Recording Secretary, Dr. Frank C. Hammond, Philadelphia; Treasurer, Dr. William Sweet, Philadelphia.

Diphtheria Not Quarantinable. — The steamer "Rhynland," which arrived at this port May 12th with three cases of diphtheria on board, was passed by both Federal and State quarantines. A list of the passengers who were to stop in Philadelphia, was furnished the Board of Health and the three persons afflicted were removed to the municipal hospital.

New Laboratories of the University.—The new medical laboratories of the University of Pennsylvania are to be unexcelled in arrangement and equipment. The building will be two stories in height above a high basement, and 200 by 340 feet in size. The first floor is to contain laboratories devoted to physiology and pharmacodynamics. The second floor will be devoted exclusively to pathology, including among others, laboratories for instruction in comparative, neurological, and surgical pathology. This building is but one of the group contemplated by the trustees, others being a new medical hall and an anatomical building.

Hatfield Prize Awarded.—The Nathan Lewis Hatfield prize of $500 has been awarded to Dr. H. F. Harris of Atlanta, Ga. The prize is awarded by the College of Physicians for a paper embodying the results of original research in medicine. The report of Dr. Harris was upon "A Study of the Alterations Produced in the Large Intestine of Dogs by the Amœba Coli, by Heat, and by Various Chemical Substances, with Notes on the Anatomy and Histology of the Viscus."

Hydrotherapeutic Institute.—At the discussion of Dr. Baruch's paper on Hydrotherapy at the last meeting of the County Medical Society, Dr. S. Solis-Cohen stated that every medical center, if not every city, should have an institute for the application of remedial agents other than drugs. These would include water, air, electricity, massage, etc. As a result it is said that a movement is under way to establish such an institute in this city.

Should Hospital Internes Give Anesthetics?—A discussion on this topic took place at a recent meeting of the Section on Gynecology of the College of Physicians, when Dr. C. H. Judd reported his conclusions and results in 850 cases of etherization. Dr. J. M. Baldy said that every institution should have a paid etherizer, the internes not being allowed to give anesthetics. He believes that the etherizer requires skill and training as well as the operator. New etherizers can be trained to replace retired ones by observing and helping the paid etherizer. A few minutes longer under ether because of an inexperienced etherizer may mean the death of a patient. The majority of cases of pneumonia following operation are due to faulty etherization. When the history is traced it will be found that the most of these patients have been black in the face or giving trouble at some time during the anesthetizing. The etherizer should never put his finger in the eye of a patient to test the reflexes. The supposed necessity of grasping the tongue by forceps is in nearly every instance due to faulty etherization. Dr. John C. Da Costa said that it was desirable to have a regular etherizer but he had seen some unfortunate results in the hands of so-called experts. His experience is that generally better results are obtained by trained hospital residents.

Dr. Thomas S. Kirkbride.—The exercises in commemoration of the one hundred and fiftieth anniversary of the Pennsylvania Hospital ended May 18th with an inspection of the insane department of the hospital. This brought to mind the splendid record of Dr. Thomas S. Kirkbride, the first superintendent, and from whom the institution took its still familiar term of "Kirkbride's Asylum." In his commemorative address Mr. Garrett paid a high tribute to the memory of Dr. Kirkbride. He was but twenty-two years of age when called to the superintendency of the new institution. To him more than to any other man of his time in this city was due the credit for the amelioration of the treatment of the insane. When the Pennsylvania Hospital was first opened it had two patients, and one of them was a lunatic. Large numbers followed and were restrained by harsh means according to the custom at that time. Dr. Kirkbride declared that corporal coercion and mechanical confinement should be done away with, and that life should be made attractive by amusements or cheerful tasks. He had a peculiar control over insane people, quieting otherwise uncontrollable maniacs. During the forty-two years of Dr. Kirkbride's service as head of the hospital it was the institution especially studied by foreign as well as American alienists.

Philadelphia and Appendicitis.—Dr. Oliver Wendell Holmes uttered his witticism about the novelist never hitting below the belt before the days of appendicitis. This malady has become a distinctly gentlemanly disease proper to discuss in polite society and we are not at all sure but New York will feel a little aggrieved at not being mentioned in the following excerpt from the New York *Sun* "Philadelphia has a new distinction, which will make her haughtier than ever. That city is the center and capital of appendicitis. According to Dr. Joseph Price, who read a paper on the subject to the County Medical Society last week, 'Philadelphia apparently lies in the center of a belt wherein appendicitis has been more common than in any other particular neighborhood in the United States.' The appendicitis belt takes in not only Philadelphia but the suburban towns near it, where most of the rich Philadelphians live. 'In this zone the number of cases of appendicitis is twice as large each year as that of any other locality of like character fortunately the rate of mortality is low. The rich Philadelphians can afford to have appendicitis and they do have it. But they seldom commit the indiscretion of dying of it. They take their pains as they take their pleasures, moderately and mildly. Physical geography accounts in part for the appendicitis belt. Much of the land is wet or very low, a country of miasma and malaria, of hay fever and grip; of grip, which is acknowledged to be an advance agent of appendicitis. Dr. Price says that a few years ago appendicitis was comparatively uncommon among women. The ratio was sixteen cases to three among women. Now women are about as liable to have the disease as men are. This increased susceptibility is attributed to the growth of outdoor physical exercise for women. Golf, cricket, bicycling, all forms of outdoor sport that are practised for long hours and in bad weather are resented by the appendix. O, well, if this be true, the appendix is even more of an ass than has been believed. People are not going to give up athletic exercise for the sake of

conciliating a notoriously useless and troublesome organ. A little appendicitis is not too high a price to pay for a good deal of sport. Besides, appendicitis in the appendicitis belt is gentle; and who can better bear the excision of the appendix than the strong and hearty folks who live out of doors?"

CHICAGO.

Chicago Sanitarium.—It is said that this city is to have a large private hotel and sanitarium where the wealthy patients of four of the leading physicians and surgeons can be treated and accommodated. The site has been secured, plans have been drawn, and a building permit will be asked for within a short time. The Chicago practitioners who form the sanitarium interest are said to be Drs. Frank Billings, Nicholas Senn, John B. Murphy, and Franklin H. Martin. The site secured is at the northwest corner of Eldridge Court and Michigan Avenue. The building will cost $400,000. It is to be eight stories high, stone front, and is to be equipped with the most modern conveniences.

Visiting Nurse Association.—This Association during April cared for 828 patients, and 3,573 visits were made by the fifteen staff members, according to a report issued a day or two ago.

Alexian Brothers' Hospital.—A testimonial concert was given for the benefit of this institution May 15th. This was the first of a series of annual entertainments which will be given for this purpose. The grounds and buildings for the new hospital cost $500,000, of which $400,000 has been paid, leaving an existing debt of $100,000. The proceeds of this concert amounted to $6,000.

Operation for Uterine Prolapse.—At a recent meeting of the Chicago Medical Society, Dr. J. Clarence Webster presented cases of post-menopausal complete prolapse of the uterus in which the prolapsed portion formed a swelling as large as two fists, hanging outside the vulva. In one case there was a papilloma about the size of a large walnut growing from the posterior lip of the cervix. He showed a photograph of one of the cases. It turned out fortunately that the papilloma was of a simple nature, therefore it did not come under consideration in these cases because the operative procedure carried out in each instance had reference to the prolapse, not to the tumor. In considering such a condition as post-menopausal prolapse of this grade, he dismissed from consideration all the simpler measures. Total extirpation of the uterus has been done by a number of operators, but has not been very favorably commented on for complete prolapse in old women. There have been failures after that operation. In these cases he adopted a special procedure which he thinks will be successful. In the first place, he performed extirpation of the uterus, which was considerably hypertrophied, for the purpose of drawing down the broad ligaments as far as possible and fastening them into the fornix of the vagina after the organ has been removed, in order that he might get upward traction of the broad ligaments at the end of the operative procedure. Extirpation is quite simple in such a case, and it is easy to draw down the broad ligaments and fasten them into the fornix of the vagina in the manner represented in a cast which was shown. That being done, he carried out extensive repair work, doing an anterior colporrhaphy, an oval flap being removed from the anterior wall. Again, in the same case an extensive colpo-perineorrhaphy was carried out posteriorly to diminish the vagina as much as possible in its diameter, and to build up a new sacral segment of the pelvic floor by a procedure which is slightly different from any method in use at the present time. The suture material used in every instance of this kind was formalin catgut buried, and superficial chromic catgut in the vaginal surfaces. The results have been very satisfactory in these patients, and they are nearly ready to leave the hospital.

GENERAL.

Harvard Medical College.—Plans for the new Medical School buildings have been completed, and a site has been chosen in the lot of twenty-six acres in Brookline which was purchased for the university last summer. According to these proposals, the school will be made up of three buildings facing an oblong court. Each of the buildings along the sides will be a series of wings connected by corridors, and each wing will be devoted to some special department. On the southeastern side the four wings are devoted respectively to anatomy, histology and embryology, hygiene, and pharmacology. The wings on the northwestern side are devoted to physiology, physiological chemistry, surgery, and bacteriology and pathology. The building on the side between these two sides will be given up to the administrative department of the Medical School. It is thought that these plans will require the expenditure of $2,000,000. Part of this sum can be realized by the sale of the present site, but as yet no other funds are forthcoming, and the beginning of the work will necessarily be delayed. The removal of the medical schools to the new site will probably not be completed for several years yet.

Obituary.—Dr. John A. Wells of Englewood, N. J., died on Monday, May 20th. He was about forty-five years of age and a leading physician in his locality.

Dr. William D. Thomas of the Chair of Psychology of Richmond (Va.) College died in Baltimore yesterday from a stroke of apoplexy. He went there a month ago to undergo

a surgical operation, which, apparently, was successful. Dr. Thomas had long been identified with the advanced education of the South.

Medical Society of City Hospital Alumni.—At the last meeting of the Medical Society of the (St. Louis) City Hospital Alumni held Thursday, May 16th, the following papers were read. Dr. A. H. Meisenbach—Surgical Operations on the Aged, with Report of Illustrative Cases; Dr. F. L. Reder—Vesico-vaginal Fistula—Operation according to Technic of Freund—Report of a Case; Dr. R. B. H. Gradwohl—The Use of the Double-knife in Histo-Pathology, with Demonstration.

Gastro-Enterological Association.—The following officers were elected at the annual meeting held in Washington, D. C., May 1st, 1901: President, John C. Hemmeter, M.D., Baltimore; 1st Vice-President, W. D. Booker, M.D., Baltimore; 2nd Vice-president, S. J. Meltzer, M.D., New York; Secretary and Treasurer, Charles D. Aaron, M.D., Detroit; Council, Max Einhorn, M.D., New York; D. D. Stewart, M.D., Philadelphia; A. L. Benedict, M.D., Buffalo. The next annual meeting of the "American Gastro-Enterological Association" will be held in Washington, D. C., May 2, 1902.

CORRESPONDENCE.

OUR LONDON LETTER.

[From Our Special Correspondent.]

LONDON, May 11, 1901.

THE ROYAL SOCIETY—ELECTION OF MAJOR RONALD ROSS—MALARIA RESEARCHES AND RESEARCHERS—PATRICK MANSON AND HIS WORK—THE LONDON AND THE LIVERPOOL SCHOOLS OF TROPICAL MEDICINE—A "GIGANTIC" EXPERIMENT ON THE PREVENTION OF MALARIA—A KNIGHTHOOD FOR FREDERICK TREVES—MEDICAL APPOINTMENTS AT COURT—THE KING AND THE BRITISH MEDICAL ASSOCIATION.

The Royal Society is a very high and mighty body and admission to its Fellowship is looked upon by us as a sort of scientific canonization The mystic letters "F. R. S." after a man's name corresponds to the halo around the head which is the symbol of sanctity in sacred art. The election takes place once a year and as many are called and few are chosen many worthy persons suffer bitter disappointment and give way to the wrath which burns even in heavenly souls. And it is likely enough that some of the scientific Peris, who are doomed to stand disconsolate at heaven's gate without being allowed to enter, do well to be angry. For the chosen few are the nominees of a small clique, and in the domain of the medical sciences it is understood that the selection has for years been virtually in the hands of one man, to wit, Sir Michael Foster, M.P., who is the Secretary of the Society. The distinguished Professor of Physiology in the University of Cambridge is, it is true, above all suspicion of unworthy motives; yet he is in a measure human and it is whispered that he has a more sympathetic appreciation of the merits of Cambridge workers than of those who have not had the privilege of sitting at his feet in that ancient seat of learning. Among the fifteen candidates who have found favor in the eyes of the Council of the Royal Society this year there are but two members of the medical profession. These are Dr. C. J. Martin, Professor of Physiology in the University of Melbourne, whose name is known to the scientific world by his researches on snake venoms and toxins and antitoxins; and the redoubtable Major Ronald Ross, who, like Lord Byron, "woke one morning and found himself famous" by his proof of the mosquito theory of the origin of malaria. The epithet "redoubtable" here applied to him must not be taken as meaning that the Major is more ferocious than the average scientific discoverer; but his military title, to which he still clings though he has for some time ceased to be an officer in the Indian Medical Service, by the association of ideas suggests the idea of an even more famous Major, that renowned *soldado*, Dugald Dalgetty. The medical Major has as aggressive a sense of what is due to him as the legendary one; and like that hero he does not allow false modesty to stand in the way of his claiming what he conceives to be his due. It must be admitted, however, that he has been treated by certain rival investigators in a manner sufficient to rouse a meeker spirit than his. An Italian worker whose name is much in the mouths of men in connection with recent researches on malaria is accused of having simply "conveyed" (as the wise call it) Ross's ideas and published them as his own. Then the great Koch has given to the world a number of reports on malaria in New Guinea and elsewhere, in which no mention is made of Ross. In this case however Ross has no more reason to complain than any of the other investigators, Italian, French, American and British, who have been working at this problem in recent years. Molière, it is known, made no scruple of appropriating whatever in the works of his predecessors appeared likely to suit his purpose; and he justified the procedure by the explanation *Je prends mon bien où je le trouve.* The celebrated German researcher seems to act on the same principle. Like a Cæsar of science

> "He doth bestride the narrow world
> Like a Colossus; and we petty men
> Walk under his huge legs and peep about
> To find ourselves dishonourable graves."

For "petty" scientific investigators the "dishonorable graves" aforesaid are found in the transactions of medical societies where the fruits of so much labor lie buried in oblivion.

Ross is a good fellow and a conscientious laborer in the vineyard of research. But his work,

valuable as it is, has been done under the inspiration of Patrick Manson who is a man of a much higher order of mind, and is indeed, in his own sphere, a genius. He has the creative imagination which not only forms pregnant theories, but by intuition penetrates to the heart of mysteries that have puzzled mankind for ages. By the guesses at truth which he has thrown out he has already sown seed in various soils that will some day grow and ripen to golden harvests. Readers doubtless remember what General Paoli (as recorded in Boswell's "Johnson") said of Goldsmith: *Il est comme la mer; il jette des perles sans s'en apercevoir.* This happy phrase might be applied to Manson. He scatters his ideas about without reserve and rejoices to see them grow to the enrichment of other men's fields. The other day at a meeting of our principal society, the Royal Medical and Chirurgical, he with characteristic modesty described his own share in the business by saying that he had not discovered the cause of malaria but he had discovered Ross. Manson was elected into the Royal Society a year ago, and now the admission of Ross to that august body may be taken as having set the seal of official consecration on the malaria discoveries.

But it is right to recall in this hour of triumph of the mosquito theory that for years Manson was ridiculed as a mere dreamer and a weaver of brain cobwebs. The "superior person" sniffed at him; the laboratory pedant shrugged his shoulders half in pity and wholly in contempt at the mention of his name, and the martinets of professional discipline shook their heads about him. Yet undiscouraged by the disapproval, open or veiled, of the "leaders of the profession" and indeed to a large extent unconscious of it, Manson held stoutly on his way. In season and out of season he preached his gospel, urging that the study of tropical diseases was a matter of vital importance in relation to the expansion of the British Empire; that men who go out to the Colonies to do battle with strange forms of disease should be trained beforehand for the task instead of having to learn their business by experience reinforced by human sacrifices. For a long time his preaching had no appreciable effect. But when the whirligig of politics brought Mr. Chamberlain to the Colonial Office, Manson found a disciple who saw the direct bearing which his teaching had on successful colonization, and the power of spreading the new gospel by the administrative pen—and perhaps uncharitable persons might say, by the sword. Manson was appointed Medical Adviser to the Colonial Office, and soon he became transfigured in profession opinion from a voice crying in the wilderness to a leader in Israel. By his influence the London School of Tropical Medicine was founded. Though very inconveniently situated, far away in the wilds of dock-land, and though cramped for space and crippled by insufficiency of funds, the School has from the beginning made steady progress. The May session commenced with twenty-two students, several of whom belong to the Colonial Medical Service, while a fair sprinkling come from Switzerland, Norway and the United States.

There is another school of tropical diseases in Liverpool of which Major Ronald Ross is the presiding genius. It has the advantage of organic connection with a school of general medicine, and of a convenient situation in a great seaport where ships bring merchandise, and with it consignments of exotic disease, from all parts of the world. It has further the immense advantage of a tutelary millionaire who not only lavishes money on the school, but organizes scientific expeditions to the most distant parts—all to the greater glory of the school and indirectly of those who work the machinery.

The rivalry between the London and Liverpool schools which at first was hidden in the decent obscurity of polite formulæ has now become open and acute. Last summer, as you know, the London School sent two men to live through the malaria season in the Roman Campagna, and protected by an armor of wire-netting to defy the deadly *Anopheles.* Now Liverpool is about to go one better, and an experiment is to be made on a "gigantic" scale to show that a large town can be swept clear of mosquitoes, and consequently of malaria, and kept so. Major Ross some time ago delivered an address in which he spoke as if he could deal with malaria as Defoe, in his *Short Way with Dissenters,* proposed to do with religious non-conformity. All that need be done was to destroy the mosquitoes by poisoning the puddles in which they breed. The method was so simple that it reminded one of the instructions given in the *Georgics* how to suppress a battle among bees, *pulveris exigui jactu.* The idea is not original for the method has been tried at Sassari and one or two other places in Italy with encouraging success; but it has not yet been put to the proof on a large scale. The result of Ross's experiment will therefore be awaited with great interest. In carrying on his campaign against gnats he will not be hampered by want of the sinews of war. It is announced that a large sum sufficient to pay the expenses of one year's trial of preventive measures in some large malaria-haunted city has been placed at his disposal. This will make it possible to maintain a staff of workers with all necessary appliances for that period. They will attack all kinds of mosquitoes to be found within the area of the city and some distance beyond it. They will destroy the adult insects found in the houses and the larvæ found in puddles or vessels of water outside. It is hoped that well-sustained efforts of this kind will reduce the whole number of mosquitoes in the selected town sufficiently to induce local Governments to adopt similar measures in other malarious towns in British possessions. The experiment will be commenced almost immediately. The selection of the town will depend largely upon the degree of assistance promised by the local authorities.

It was hinted in a previous letter that certain of those whom the king had delighted to honor for their services in South Africa were disposed to think His Majesty had scarcely honored them enough. This grave failure of royal recognition has now been rectified in the case of one of the aggrieved ones. Mr. Frederick Treves was a few days ago made by the King a Knight of the Royal Victorian Order, and he is henceforth entitled to all the privileges of the exalted rank to which he has been raised. Mr. Justice Shallow was, as he tells us, "a gentleman born . . . who writes himself *armigero;* in any bill, warrant, quittance or obligation, *armigero.*" Sir Frederick can do more: he can, if he will, write himself *eques auratus;* and the adjective would have a special significance as applied to the new medical knight for no members of his profession has won more golden opinions from his brethren, or more samples of the gold currency of this realm from the British public.

It may be added that Treves was Surgeon to the King when Prince of Wales and not long ago he was gazetted one of His Majesty's Honorary Serjeant Surgeons. This office or rather title was, I believe, especially created for MacCormac and him. Lord Lister holds the ancient office of Serjeant Surgeon, the incumbent of which in old days was expected to accompany his sovereign into battle. Among other novel features in the list of Court Appointments it may be pointed out that the name of Sir Felix Semon, the Laryngologist, figures in the list of Physicians Extraordinary; and there is a special office of Honorary Anesthetist to His Majesty which is filled by Dr. F. W. Hewitt. Whether any special significance is to be attached to the creation of such an office, I cannot say. It is probably merely ornamental, and given as a reward for special service like the title "Physician Accoucheur to the Queen," which used to be given to distinguished obstetricians long after Her late Majesty could have had occasion for their professional services. The inclusion of a specialist among the physicians, however, has caused a good deal of what Macbeth calls "curses not loud but deep" among the bigwigs of the College of Physicians who do not like this official recognition of what they regard as a lower grade of practice.

Among the public Semon's appointment seems to have given rise to an absurd rumor that the King is suffering from cancer of the throat. One hears this everywhere—from members of Parliament, from Editors of leading papers, from quidnuncs at Clubs, from gossips of all sorts and conditions, both within and without the sacrosanct pale of "society." There does not appear however to be a shadow of foundation for the report, and Sir Felix Semon's attendance on the King has, it may be surmised, much more to do with cards than with cancer.

In connection with the King it may be mentioned that His Majesty has just consented to become Patron of the British Medical Association. At the last annual meeting of that body held at Ipswich the Prince of Wales, as he then was, was elected an honorary member. As the official wheels of the Association grind very, very slowly the diploma of Membership was never delivered to him, and when he came to the throne he sent a curt intimation that he could not retain the honorary Membership which had been thrust upon him when he was still, in a legal sense, an ordinary mortal. The fact that he has graciously consented to extend his royal patronage to the Association will be highly gratifying to its Members, for in this country a divinity doth still hedge a throne, and the patronage of royalty is considered a most valuable asset by all public bodies and institutions.

TRANSACTIONS OF FOREIGN SOCIETIES.

French.

PUBLIC LAUNDRIES—MOSQUITOES IN PARK FOUNTAINS — KERATOMYCOSIS — OXYURIS VERMICULARIS AND APPENDICITIS—FOREIGN BODY IN THE BRONCHI—FRACTURE AND MASSAGE—ANTERIOR MEDIASTINOTOMY—PUERPERAL SEPTICEMIA—EPIDEMIC CEREBROSPINAL MENINGITIS —VARIOLA IN THE NEW BORN—SCIATICA AND COCAINE.

DELORME, at the Académie de Médicine, April 9, 1901, read a paper on the economic and hygienic relations between public laundries and public health, endeavoring to show that henceforth one may safely put the linen of those suffering from contagious disease among that of healthy people, provided it undergoes the bleaching processes usually followed in these places. Careful examination of the water used in bleaching linen even if infected with various toxic germs, like the streptococcus, staphylococcus, etc., with repeated cultures from them showed that the germs were killed in the process.

DEBOVE, at the session of April 16th, discussed the presence of the mosquito larvæ in the water of park pools and fountains. The prevention of this lies in maintaining a rapid evacuation of the water, never letting it stagnate or in covering its surface with a layer of petroleum oil which will kill the larvæ.

PANAS, at the session of April 2d, presented an article in behalf of Collomb (Geneva) on a case of corneal infection by the *aspergillus fumigatus.* Such corneal disease is very rare, since only eight cases are on record, which includes that of Collomb. In almost all, the patients were young laborers who became infected by the pene-

tration into their eyes of dust from the ground or from the husks of cocoa. The corneal ulcer with a typical hypopyon, which might be confused with this condition alone, appears to afflict the older patients, especially if the conjunctiva and lachrymal passages are the seats of a chronic inflammation. In keratomycosis the ulcer usually occupies the center of the cornea and at its own middle presents a greyish-yellow core which is adherent and very hard to detach. Its elimination is slow and one observes about the line of separation no fistulous tract so common in the serpigenous ulcer. Although the pain of this affection is very considerable, its prognosis is very much better than is that of *ulcus serpens,* because it is never accompanied by a purulent degeneration or a general destruction of the eyeball. The one permanent damage to the eye following this disease is a corneal scar of greater or less depth and extent.

MOTY (military surgeon) noted the relation between appendicitis of an obscure origin and the *oxyuris vermicularis,* with the conclusion that they are quite frequently found in the organ. In order to detect their presence the appendix should not be washed, but should be immediately opened and carefully inspected, when the nematode will easily be found. Cold water will kill and deform them. In three out of five cases of appendicitis of unexplained origin recently operated on by him he had not the slightest difficulty in demonstrating the worm in the cavity of the viscus. The lesson taught he thinks is that vermicide catharsis would be a valuable treatment in the early medicinal management of appendicitis of unknown cause, and always when worms are suspected anywhere in the intestinal tract.

PIÉCHAND (Bordeaux) communicated an observation of an child three and a half years old who had swallowed a steel nail two and a half centimeters long. Radiography showed the nail lodged in one of the bronchi. The trachea was opened and a steel sound very cautiously passed down to the neighborhood of the foreign body and then a strong electro-magnet was attached to the sound. In a moment the sound was withdrawn and the nail was found attached to its extremity. The little child is to-day perfectly healthy and happy, without any sequelæ of its accident.

LUCAS-CHAMPIONNIERE presented a thirty-eight year old woman who had received a complete fracture of the left humerus and was successfully cured by mobilization without apparatus. Under massage the pain which had been very active, decreased, the muscular spasm vanished, and the overriding of the bones was greatly corrected, so that to-day her arm is not deformed and is a thoroughly strong and useful member although only thirty-eight days after the injury.

QUÉNU, at the Société de Chirurgie, March 27, 1901, in discussing the paper of Ricard at the former meeting on the subject of anterior mediastinotomy, said that he would endorse such operative interference by this unusual and highly dangenerous route of approach for the removal of a foreign body lodged in the trachea or bronchi provided it was not accessible by any other route especially the natural. But as to the precise technic to be followed, he could not quite agree with the steps detailed by Ricard in his extraction of a tube lodged at the bifurcation of the trachea and in the mouth of the right bronchus as described at the last sitting. After numerous experiments on the cadaver he has concluded that a posterior mediastinotomy will be far preferable to that of Ricard, the anterior, and for the following reasons. Aside from the intercostal vessels which are negliable there are no large blood vessels encountered except the azygos veins and their confluence. This is significant when compared with the many large trunks in and around the anterior approach. Considerable space can be gained by liberal resection of the ribs and the deep field although far removed from the surface finally exposes the soft median posterior area along the trachea through which the foreign body can almost always be felt and directly exposed and removed. In his attempt to do this Ricard in the anterior field utterly failed.

TUFFIER gave as his opinion the wisdom of always using a guide in any mediastinotomy a large radioscopic projection of the patient's mediastinum and the situation of the foreign body.

KOCHARD reported for Faure, seven cases of puerperal septicemia operated on by hysterectomy, of which he is a firm partizan especially by the vaginal route. In order to obviate the friability of the septic uterus he employs cyst-forceps instead of the ordinary type and finds that they are a means of saving time. He has been able to remove the uterus thus in from four to fifteen minutes. Of these seven, six patients died, as they were operated on too late but the last fully recovered, because she was brought to him much earlier in the disease.

NETTER, at the Société Médicale des Hopitaux, March 29, 1901, spoke of the remote and immediate results of epidemic cerebrospinal meningitis and raised the point whether or not any of the destructive nerve lesions seen after it may arise after convalescence has been apparently complete. This important question can be answered by a careful comparison of the various epidemics of this disease of the past, wherein may be found many examples of absolute and complete recovery and many of damaged sight, hearing and muscular power, shown in paralysis, atrophy and contractures and lastly of impaired intelligence. But a more satisfactory answer of the problem will be a reference to the cases of the present time in which an actual purulent exudate upon the surface of the brain and spinal cord, can be established by lumbar puncture, especially when often repeated. In May, 1900, he observed seven cases of the disease, among which three were followed by loss of vision and four recently seen again were completely cured. During the fol-

lowing three months, June, July and August, 1900, he again saw three cases whose disease went on to complete recovery. Here then are seven cases whose cure has remained absolute for a period of many months after the disease. This final integrity of the entire cerebrospinal apparatus has after all no remarkable features, although one has been able to prove abundant purulent exudate upon the membranes, when compared with the remarkable and final recoveries from purulent pleurisy.

ROGER stated that he had recently had occasion to observe eleven women who were pregnant and at the same time suffering from variola, but went on to full term or very nearly full term. The infants at first sight appeared normal or nearly normal, but on taking their temperature one found that they were all hypothermic. The thermometer in fact did not in any one register over 37° C. and most frequently was 36° C. In one case it was as low as 31°, 30° and even 28° C. Three of the children died respectively four, six and eleven days after birth without having shown any symptom except the low temperature and jaundice. Another child presented moreover a scarlatiniform eruption on the eve of its death. In seven of the cases the development was more frank and really went on to the true variolous eruption. This was ordinarily accompanied by a rise in temperature which went above the normal. On the following day a few discrete scattered vesicles appeared filled with a thick fluid and rapidly desiccating. Death ensued three or four days later with very low temperatures. In one child the temperature fell to 27° C. about two hours before death. The real evolution of the eruption was occasionally like that in the adult. The papules went on to true pustulation. In spite of its gravity the disease was not always mortal because one child recovered although its temperature reached 35° C.

MARIE communicated in the name of GUILLAIN and himself an observation of a patient of thirty-five years afflicted with a moderate sciatica with a well-marked sign of Lasègue. March 26 a small dose of cocaine was injected into his spinal canal resulting in the disappearance within six minutes of the pain. The next day it returned but with much less intensity and then that night disappeared altogether and has since then not reappeared.

SOCIETY PROCEEDINGS.

AMERICAN THERAPEUTIC SOCIETY.

Second Annual Meeting, Held in Washington, D. C., May 7, 8, and 9, 1901.

FIRST DAY—MAY 7TH.

Presidential Address.—This was delivered by Dr. Reynold W. Wilcox, Dr. H. C. Wood being too ill to attend, and consisted of a review of the progress of therapeutics during the last twelve months. This period, he said, had witnessed but few startling achievements in the treatment of suffering humanity, yet a careful review of the vast therapeutic literature gave much satisfaction in that the progress had been of a kind that was likely to be permanent. He referred to the careful study of older remedies and methods, the re-investigation of theories and practices based upon them and the readjustment of their conclusions in the light of these researches. So of the newer additions to their resources, it might be said that to their study was devoted intelligent discrimination, and conservative opinions had been reached as to their value and importance.

For rapid advancement in knowledge and substantial increase in their materials and methods, they were living in an auspicious decade. The therapeutic nihilism resulting from the despair of the dead-house had largely passed away. According to the Teutonic idea, the completeness and conclusiveness of the patient's history was marred by the remoteness of the necropsy report or its absence altogether. While to-day the professed therapeutic nihilist was looked upon as a therapeutic ignoramus they were all somewhat in danger of stepping over the lines of a healthy optimism into the obscurity of an insistent credulity. The society had very properly placed a barrier against the presentation of "secret," patented or copyrighted remedy, remedies, or methods of treatment," by forbidding "paper, report, abstract or other communication, either written or verbal, which directly or indirectly commends or advertises them," and prohibiting discussion upon them, although it permitted adverse action upon these subjects. Thus it was that those substances and methods whose extravagant claims were in inverse ratio to their merits, might meet with their just deserts; others were to be considered *sub judice* until freed from unprofessional restrictions. This stipulation, then, while limiting but slightly the therapeutic resources of real worth, markedly lessened the amount of alleged therapeutic literature which required to be consulted.

Dr. Wilcox then proceeded to refer to the attention which had been devoted recently to internal antisepsis, speaking more or less favorably of the use of chlorine in enteric fever, guaiacol or creosote (particularly as organic salts) in pulmonary tuberculosis, naphtol in various conditions found in the alimentary canal, and various organic bismuth salts in the treatment of the same conditions. As samples of general internal antiseptics he mentioned chlorine, soluble silver, the salicylates and quinine. The conclusion at which he arrived was that, as a result of the labors of Lister and countless followers, the ideal in regard to internal antisepsis had been nearly attained. Internal antisepsis now rested on quite as secure a basis as did the surgical when the pioneers began their work, and the ensuing three decades (it was thirty years since this work was

begun) would doubtless bring to fruition their most daring hopes. As the surgeon gave credit to Lister, so much the therapeutists acknowledge their indebtedness to Bouchard for many of their facts, trusting that others would continue the work that he so painstakingly had begun. At this time they could safely say that internal antisepsis was more than the dream of the theorist. Internal antisepsis, it was possible, might be useless or detrimental, under certain conditions, or might be absolutely contra-indicated because of the patient. How best to attain it was a question to which the answer would vary with each succeeding year as their knowledge of infectious diseases and the best way of combating them rested upon a broader and more secure foundation.

The Corning-Bier method of producing anesthesia by cocainization of the spinal cord was next discussed, the untoward symptoms that result apparently from the toxic action of the cocaine being noted. There was also the danger that the anesthesia might persist for a very long time, or on the other hand that it might be found impossible to produce sufficient anesthesia for purposes of operation, when general anesthesia would have to be resorted to. Permanent disability, so far as he could ascertain, had not been reported. The field of its employment would seem to be as a palliative measure in operable neoplasms producing excessive pain. In obstetrics its use had been successful, both in relieving pain and in not interfering with the usual course of labor and subsequent recovery. In general surgery, the question was still open for discussion, for its advantages were not demonstrably greater, nor its safety necessarily more pronounced than was general anesthesia, while the fact that the patient was conscious during the operation might be a decided objection.

Touching next upon the electric-light bath, Dr. Wilcox remarked that various observers had found it the most satisfactory and efficient of all methods of inducing perspiration, inasmuch as it was a direct stimulant to the gland. Its peculiar value was due to its efficiency as a source of radiant energy which was not communicated to the skin by convection, the skin and all living tissues being like the air in respect that they were to a large extent transparent to radiant heat. Another advantage of this bath was that it encouraged heat elimination and the excretion of effete matters, and that, the temperature of the blood being elevated, there was a quickening of all the vital processes. It was claimed that this method was particularly valuable in the treatment of cardiac disease and in diabetes, while it had also been found useful in dropsy, chronic dyspepsia, chronic malaria, syphilis, rheumatic affections, anemia, etc. A local application followed by an ice compress was almost a panacea for the pain of sciatica, and it had likewise yielded excellent results as a nerve tonic in the treatment of neurasthenia. The Finsen light and the Roentgen-ray treatments were also reviewed. The speaker, however, thought that the claims of the latter in regard to the treatment of certain forms of tuberculosis required more time for absolute demonstration.

Sodium cacodylate, Dr. Wilcox went on to say, had probably attracted more attention than any one other remedy. It could apparently be safely introduced into the body in much larger doses than its arsenic content would lead them to suppose, and could even be administered subcutaneously, althought there was considerable dispute as to the agreeableness of this method of administration. It had received favorable commendation in the treatment of tuberculosis, anemia, and other diseases and conditions. Adonidin had been favorably reported upon by one observer who said that it could be safely administered in certain circumstances when digitalis, if used at all, ought only to be used with the greatest caution.

After speaking of other remedies, Dr. Wilcox condemned the use of carbolic-acid solutions as moist dressings, and said that carbolic acid in any strength should be included in the list of those drugs which could only be procured by the prescription of a physician. When alcohol was used as an antidote to carbolic acid, it should not be forgotten that promptness of action was of the utmost importance. Since 60 grains of carbolic acid almost always proved fatal and the drug could be easily obtained, a knowledge of the antidotal power of alcohol should be disseminated as widely as possible among the people.

The serums, suprarenal extract, apomorphine, salol, and other drugs, having had their claims examined, Dr. Wilcox took up the subject of drug standardization, showing the advantages that would be derived from it. He then remarked on the fact, which he considered gratifying, that hydrotherapy was now being investigated by experienced and trustworthy observers. He also paid a brief tribute to the excellent work that was being done in the laboratories of the principal medical schools as well as in those under the control of private enterprise. Paying his compliments to the fad known as "Eddyism," he expressed his regret that it had not borne fruit either in the way of affording material for the study of the natural history of untreated disease, or of ridding them of patients they could not cure —those who had nothing the matter with them. In connection with this part of his subject he made note of the fact that when their own interests were affected the Christian Scientists acted very much like other people, instancing the recent proceedings before the New York legislature, when they resorted to the customary methods for influencing legislation, and carried them out with such prodigality that the unusually callous and corrupt legislators were astonished. Their brazen effrontery, however, he added, was likely to result in the political death of those who had participated in their bounty. He concluded by alluding to the importance of the work being carried on by the committee entrusted with the revision of the Pharmacopœia and of that in

which the Therapeutic Society was engaged.

A business meeting of the Society was afterward held, the proceedings being conducted in private.

SECOND DAY—MAY 8TH.

The Secretary, Dr. Noble P. Barnes, read a letter from Dr. Eli H. Long of Buffalo expressing regret at his inability to be present, and suggesting that at next year's meeting there should be a symposium on therapeutic teaching.

Suggestions Concerning the Use of the Metric System in Prescription Writing.—A paper thus entitled was read by Dr. Francis P. Morgan of Washington who pointed out the ease with which the metric system could be learned by students, and also the convenience it possessed for the practitioner when once he had become familiar with it. He admitted the hopelessness of getting the approval to the proposed change of those who had been so long accustomed to another system. It was all the more important, therefore, that the advocates of the metric system should impress their views on authors and teachers, and endeavor to convince them of the advantages of the system, the chief of which were its extreme simplicity and uniformity. Some text-books had made the concession of giving doses in metric terms as well as in those of apothecaries' weights and measures, but they were given in such a complicated way as to be confusing and practically useless. This was due to the fact that the authors, being desirous of giving the doses in both systems, took those of the apothecary system and translated them literally into decimal figures, the result being a long string of figures which were of no use, and had a very puzzling effect on the student and practitioner who wished to make use of the system. All doses could be well enough expressed in one or two figures, without this apparent desire to attain accurate equivalents of apothecaries' weights and measures.

Dr. Leon L. Solomon of Louisville endorsed everything that had been said as to the advantages of the metric system, but said he thought the doctors were not so much to blame for the continuance of the present practice as was the Government, which ought to have the courage to stamp the Pharmacopœia with its approval, and insist on all medicines being weighed and measured by the same standard.

Dr. Thos. E. Satterthwaite of New York remarked that there was no doubt that the metric system was the most scientific, but there were difficulties in carrying it out, among them that of getting pharmacists to fill prescriptions in accordance with their exact terms.

Dr. Solomon said it was as easy to teach pharmacists as it was to teach doctors the metric system.

Dr. Satterthwaite explained that he did not mean to cast any reflection on the pharmacists; all he intended to say was that they were not taught the metric system.

Others who took part in the discussion were Drs. Wm. M. Sprigg and Robert Reyburn of Washington, Dr. A. C. Barnes of Philadelphia, and Dr. Stewart of New York, all the speakers expressing more or less approval of the metric system.

Revision of Pharmacopœia.—The Chairman, Dr. Wilcox, on behalf of the Pharmacopœia Committee of the Society, reported that the work of the Revision Committee was in a very satisfactory condition—that many of the matters which must of necessity be first considered, such as questions of atomic weights, temperature at which specific gravity should be determined, etc., had been practically brought to a conclusion. The substances which were to be expurgated had been carefully considered and practically a final conclusion reached regarding them. Of the large number of substances proposed for admission, a considerable number had been provisionally tested, the restrictions imposed by the convention being always borne in mind. It was of interest, in connection with the discussion just closed, to mention that the doses to be introduced for the first time in the next edition of the Pharmacopœia were to be the average adult doses expressed in the metric system, with the approximate equivalent doses expressed in the old system enclosed in brackets. The Revision Committee addressed inquiries to all the State and National medical and pharmaceutical societies, in order to ascertain what substances the physicians desired to be officially recognized and what substances were usually prescribed by physicians. The Committee had left no stone unturned to ascertain what was the general desire as to the substances that should be included in the Pharmacopœia. Any criticisms on the Committee, therefore, would seem to be based on insufficient ground, for it had offered every possible opportunity for the making of suggestions. The work was progressing favorably, and the Committee expected to present the finished work in a somewhat shorter period than was required for the last revision. He added a number of other instances that had come within his notice in regard to the metric system to show that it was gaining favor in other professions and branches of business.

The Relation of the Pharmacist to the Physician, and the Relation of Pharmacy to Materia Medica and Drug Therapeutics.—This subject was discussed at length in a paper by Dr. F. E. Stewart of New York. He concluded by submitting a resolution which, while expressing disapproval of everything tending to create monopolies in medical products and preparations, recognized the necessity of protecting capital invested in the legitimate chemical and pharmacal industries, and therefore the propriety of approving the patenting of processes and apparatus. As an instance he said that the patent on the process for manufacturing acetone-chloroform should be recognized and also the product of such process known as chloretone, but they should not approve

of extending the protection of the patent to the main product, which in this instance was acetone-chloroform. He also thought they should approve of the registration of trade names for brands of products to be used in connection with their generic or identifying names, provided that formulas were published whereby the products might be duplicated by those skilled in the art; otherwise there was danger that the art of preparing them might be lost to medical science and the interests of the public jeopardized in consequence. He strongly urged the Society to take the initiative in the formation of a National bureau for the purpose of regulating the conditions affecting the manufacture and marketing of medical products and preparations, and at the same time securing uniformity in their strength by means of the establishment of standards. Medical men and pharmacists were alike interested in this, and they should coöperate to prevent medicines becoming subject to the control of purely commercial interests.

Dr. A. C. Barnes of Philadelphia said the question raised by the paper was of the highest importance. It resolved itself into this, How could physicians get reliable information about new medical products and preparations? Things were different here from what they were abroad—in Germany, for example, where all such new products and preparations were pharmacologically studied and then placed in the plinics.

Dr. Leon L. Solomon of Louisville thought the thanks of the Society were due to Dr. Stewart for his persistent efforts to get a bureau of medicine established. The last speaker had sounded the keynote of the situation when he said that what medical men wanted was the truth. They wanted the truth, the whole truth, and nothing but the truth. If they only devised means of getting this, it was of minor importance whether the process or the name were patented or not, for sooner or later they would become public property. As an example of the difficulty of getting the truth under present circumstances, he recalled a report made by a certain doctor on vaccine virus, in which there were 99 per cent. takes. The proprietors of the vaccine wanted the additional fact omitted that in 50 per cent. of the cases sore arms resulted. If the report had gone out in the shape they desired it was evident that it would not have contained the whole truth.

Dr. Satterthwaite of New York suggested that the matter referred to in the paper and resolution might with advantage be referred to a committee with a view of the taking of definite action.

The Chairman said the subject came well within the jurisdiction of the Judicial Committee, and on his recommendation it was referred to that body.

The Inertness of Petroleum Compounds When Given Medicinally.—This paper was read by Dr. Robert Reyburn, Washington.

Dr. A. C. Barnes said there was no doubt about the non-absorption of petroleum, but that was not conclusive evidence that it was of no value medicinally. A paper by a Philadelphia colleague, which was published in the MEDICAL NEWS, caused him to look into the subject, and his experience in several cases of tuberculosis convinced him of the value of petroleum, not on account of its nutritive qualities, but because it acted as an aid to digestion.

Dr. Solomon thought the petroleum preparations were of use in so far that they soothed the intestinal mucosa.

Dr. Reyburn, while agreeing with some of the remarks that had been made, said petroleum was not to be considered a substitute for cod-liver oil.

Dr. Stewart remarked that the subject was a good one to refer to the proposed bureau of medicine, and let the manufacturers furnish the funds for its investigation.

Heart Disease.—This was the subject of three papers, the first being by Dr. Thomas E. Satterthwaite of New York, who discussed the therapeutics of chronic heart diseases and their complications. Notwithstanding all the recent advances in cardiac therapeutics (and the changes of the last ten years had been revolutionary), he said they were less and less disposed to cry up special remedies for special affections. This was particularly true in valvular disease, where they now placed less weight on the importance of abnormal sounds and more on the attendant phenomena and especially on the character of the lesions behind the sounds. The gravity of the lesion was not always measured by the intensity of the sound. A loud and harsh murmur was not incompatible with an average length of life, whereas a valve might be almost occluded, as in mitral stenosis, without giving an recognizable auscultatory sign. With the best opportunities and the largest experience one was not always able to distinguish between a functional and an organic murmur. Again, single valve lesions were the exception rather than the rule, and there were, besides, frequently complications which made diagnosis difficult from auscultatory signs alone. Recent changes in treatment he summed up thus: The idea of complete rest had been supplanted by rest alternating with bodily activity; venesection by determination of blood to the surface through resistant exercises and carbonated baths; hydrogogue cathartics had been replaced by stomachics and mild alteratives and diuretics; heart stimulants by general nerve stimulants or sedatives, alteratives and nutrients; while drugs of the digitalis group were utilized chiefly for their diuretic action in renal complications, mainly parenchymatous, nephritis or abdominal dropsy. Drugs of the digitalis group, including strophanthus, convallaria and adonis, were always uncertain and therefore dangerous, and should only be employed either when other remedies were inadmissible, or in kidney or liver complications for brief periods, or where nothing more was possible than a brief prolongation of life.

Dr. Wilcox said that in the masterly review of

the subject the author had given them there was one point he had not mentioned, though he had dealt with it in a separate paper some time ago, and that was that in the treatment of cardiac diseases, they were traveling further and further away from the idea of inflammation, and paying more attention to degeneration. The value of rest could not be denied, but the importance of alternating exercise with it could not be too much insisted on. He agreed with the author that they should be more careful than the average doctor was in the use of drugs.

Dr. Solomon maintained that digitalis should still occupy the front rank in the treatment of chronic heart disease, and certain manufacturers were now testing it in such a way as to ensure its uniform strength.

Dr. E. M. Houghton of Detroit said he had been engaged in experimental work on animals with drugs of the class referred to, and the result was to show that they had not the gastro-intestinal irritating effects that were generally attributed to them. His experiments were still in progress; when they were completed he would be pleased to report the conclusions at which he arrived.

In replying on the discussion Dr. Satterthwaite said it was only fair to admit that many good men used some of the drugs of which he had spoken with scant approval.

Dr. J. N. Hall of Denver reported two cases of Aneurism treated by Wiring and Electrolysis, and a paper by Dr. Eli H. Long of Buffalo, on "Principles of Cardiac Therapeutics in Recent Valvular Disease," was read by a substitute, the author being absent.

THIRD DAY—MAY 9TH.

Election of Office-bearers.—The election of office-bearers resulted as follows: President, Dr. Reynold W. Wilcox, New York; First Vice-President, Dr. Howard H. Barker, Washington; Second Vice-President, Dr. Thomas E. Satterthwaite, New York; Third Vice-President, Dr. Leon L. Solomon, Louisville; Secretary, Dr. Noble P. Barnes, Washington; Recorder, Dr. William M. Sprigg, Washington; Treasurer, Dr. John S. McLain, Washington; Curator, Dr. George C. Ober, Washington.

Next Meeting.—It was decided to hold the next meeting in New York on the second Tuesday in May and following days.

Bureau of Materia Medica.—On the recommendation of the Judicial Committee, it was resolved to act upon the suggestion made by Dr. F. E. Stewart on the opening day of the meeting by appointing a committee of three, with Dr. Stewart as chairman, to consider and report upon the question of establishing a bureau of materia medica.

Therapeutic Value of Hypnotism.—Dr. Francis H. Miner, Washington, gave a practical demonstration. The subject upon whom his experiments were conducted was a boy of seventeen, who had been a typical cigarette fiend, but who had been cured by means of suggestion under hypnotic influence. At the close of the demonstration, which included illustrations of so-called psychic blindness and psychic deafness, as well as the more common exhibitions of the influence exercised by the hypnotist, and which was watched and listened to throughout with marked interest, Dr. Solomon asked whether the so-called hypnotic subjects were usually of the class of the boy before them. Dr. Miner replied in the negative, but the other types refused as a rule to come before a medical body for purposes of demonstration. Dr. Solomon further inquired whether hypnotism brought the doctor into good or bad repute. Dr. Miner thought its tendency was to bring the doctor into bad repute. In fact, until the public became educated on the subject, hypnotism could not be used without endangering the reputation of the doctor. Dr. Solomon said he had had some personal experience which was of interest. He made it a point to avoid using hypnotic influence, but on one occasion he had under observation a young gentleman, a lawyer and a man of superior parts, who knew that he (the doctor) could hypnotize. On one occasion he said to his patient quite incidentally, and without the remotest intention of exercising the influence of suggestion, "This medicine I am about to give you will cure you of your smoking." The young man protested that he did not want to be cured of smoking, and said that he would as soon die. Nothing more was thought of the matter until ten days or so afterwards, when the young man called him up on the telephone and complained bitterly that he had taken advantage of him. All desire to smoke and ability to smoke had departed from him, and he wished to get out of the spell. Afterwards at a dinner the young man sent to him asking permission to smoke a cigar. The case was peculiar because he was the only man he had met who was above the general average of hypnotic subjects.

Dr. T. L. Coley, Philadelphia, recalled the fact that Charcot, of Paris, after being a great believer in the therapeutic value of hypnotism, modified his views very much, largely in consequence of finding that he was so often imposed on by his subjects.

Dr. Wilcox, speaking from his own experiences in connection with Charcot's experiments, said he was unfortunate in having as subjects only a number of very excitable and neurotic young women. It was difficult to avoid being deceived, especially when one had subjects of this kind. Dr. Wilcox said he would never hypnotise a patient because, in the first place, of the peculiar reputation it gave a medical man, and secondly because several patients who had come under his observation after being hypnotised showed symptoms of vitiated will power.

Trade and Scientific Names of Drugs.—Dr. A. C. Barnes, Philadelphia, called attention to the fact that the next two items on the pro-

gramme, "Therapeutic Use of Chloretone," and "Heroine in the treatment of Opium Habit," dealt with drugs which were spoken of under their trade names. He did not think it would be right to allow the discussion of the preparations referred to under such names. It was to be remembered that the society was composed of a body of scientists, and all matters that came before them should be discussed on their scientific basis and under their scientific nomenclature. He suggested and in fact was prepared to move a resolution providing for the adoption of this course at all future meetings. Unless such a rule was laid down the Therapeutic Society would be in danger of getting a bad name and of having undesirable uses made of it.

Dr. Solomon said he was prepared to second such a motion. Dr. Satterthwaite inquired whether the adoption of the motion would prevent the reading of the papers.

Dr. Barnes said that was not his wish. They had on the program two papers by very competent men, and his motion would not interfere with their being read. He simply wished to provide safeguards for the future.

Dr. Stewart repeated and emphasized the remarks he had made on the previous day as to the necessity of distinguishing at these meetings between the scientific and trade names of products and preparations. Of course he did not wish to reflect on any of the manufacturing companies, but on the other hand he did not wish to show partiality for any firm's products. All must be treated on their merits and under their scientific names.

The Chairman said he understood the object was simply to get the matter into proper shape. He was sure there was no desire to discriminate in favor of or against any one.

Dr. Barnes said that of course he had no desire to be discourteous or to reflect on any one. They all, however, wanted to make the Therapeutic Society a scientific body. Commercial interests were of great importance in the advancement of therapeutics, but they ought to insist on only the scientific phase of the subject being considered there.

After some further discussion it was decided to pass a temporary rule providing that papers referring to particular drugs should only be read when these drugs were referred to under their scientific names.

Dr. Houghton was accordingly requested to use the term acetone-chloroform in lieu of chloretone, which he did, though he explained that it had been called chloretone in order to distinguish it from other preparations derived from acetone and chloroform. It might, he suggested, be still more correct to speak of the product by its chemical designation of trichlor-tertiary-butyl alcohol. He then proceeded to review the reports which had been made by impartial observers, all going to show that the drug was useful as a hypnotic, local anesthetic, antiseptic and analgesic.

Dr. Stewart said he thought Dr. Houghton had sufficiently demonstrated the necessity of giving the product a special name, and if the manufacturers chose to donate the name to science he for one would be pleased to accept it, and he thought the society should do the same, just as the British Pharmacopœia did in the case of antipyrine.

Therapeutics of Alcohol.—Dr. Leon L. Solomon of Louisville said while showing that men in good health did not require to use alcohol any more than they required to use tea, coffee or tobacco, referred to its use as a medicine in a large variety of diseases with the view of demonstrating that it was of incalculable value, whether used as a stimulant in the ordinary way or as a local application.

BOOK REVIEWS.

THE TREATMENT OF FRACTURES. By C. L. SCUDDER, M.D. Second Edition. W. B. Saunders & Co., Philadelphia and London.

THIS work is one which deserves strong commendation. It is not too much to say for it that it is certain to occupy, and deserves, a place in the very front rank of authorities upon this topic.

To the X-ray in fractures a careful study is devoted, with abundant illustrations. Much attention is bestowed upon the anatomical basis for diagnosis, with consequent avoidance of blunders in treatment. There is an excellent and sensible chapter upon the ambulatory treatment of fractures of the lower extremity.

Certain points, though not very many, seem fairly open to criticism; and we think the author will perhaps change his views thereupon with added years. For example (pp. 265 and 279), the advice to measure from the anterior superior iliac spine to the internal malleolus, to determine shortening in fracture of the shaft of the femur. It should be an axiom in surgery not to measure over a greater distance, nor more bones, than necessary; lest the natural difference so often found as to the length of the two limbs deceive. Measurement down to the adductor tubercle or other prominent bony point near the knee is wiser.

Again (p. 83) the assertion that cystitis is always associated with fracture of the spine, and, once more, the statement (p. 304) that fatty embolism exists in every case of fracture, would seem too sweeping.

It would have been well in discussing this last topic to have alluded to shock, and have given the differential diagnosis therefrom.

Upon page 106 is figured, under clavicle fracture dressings, the "Velpeau bandage." This seems to be a modification of the third bandage of Desault; it is certainly neither the position nor the bandage taught by Velpeau.

In the preface the author objects to naming splints of special manufacture, and says such are not described. In general he has followed this laudable plan—with resulting simplicity. However, "Cabot's wire splint" (the book is dedicated to Cabot) is illustrated for various thigh and leg fractures no fewer than seventeen times. And if the Cabot wire splint be discussed by name in thigh fracture, for instance, surely so famous a wire splint as that of Nathan Smith, and also that of Hodgen, deserve at least a mention.

The chapter upon gypsum is the only really weak one. No reference is made to any other plan than that of entirely surrounding the limb, and this, too, is illustrated in eleven cuts.

"Plaster of Paris, when used for fractured bones, is applied either before or after swelling has taken place; if applied before, it constricts the seat of fracture, prevents swelling, and may cause great pain; if applied after the swelling has taken place, it becomes loose as soon as the swelling of the soft parts subsides, and motion of the limb in the splint and of the fractured bones one upon the other is possible" (p. 415). The author is seemingly unaware of the neatest, most comfortable and best of all methods of splinting a leg fracture, namely, that simple modification of the Bavarian splint wherein a plaster sandwich is made by spreading a quarter-inch of plaster cream between two pieces of wet bandage-cloth, to run from toes to knee, up the front of the tibia, but only wide enough to encircle half the leg. This is held in place by a temporary bandage, until it sets, making a perfect mold of the oiled limb beneath; then the bandage is removed and replaced by a few strips of surgeons' plaster. Thus abundant space for swelling is allowed at the back.

In this chapter the author might well have mentioned silicate splints, and the various easy methods of removal of plaster ones. Few will agree with his dictum, "The removal of the plaster splint is difficult. No instrument has been devised that is more efficient than an ordinary sharp jack-knife."

From these random criticisms it must not be inferred that we consider the work unworthy of reliance. On the contrary it is exceedingly able; and the clear demonstration of anatomical guides in diagnosis of fractures at the elbow, wrist and elsewhere, is in itself worth the price of the book.

The number of illustrations—all original—is surprisingly large, and they are exceedingly creditable as to quality and value in explaining the text. To Dr. F. J. Cotton the author gives most of the credit for the artistic work.

TUBERCULOSIS AS A DISEASE OF THE MASSES, AND HOW TO COMBAT IT. Prize Essay, Berlin, 1899, by S. A. KNOPF, M.D., New York. Published by M. Firestack, 200 West 96th Street, New York.

AT the meeting of the "International Congress for the Study of the Best Way to Combat Tuberculosis as a Disease of the Masses," which convened at Berlin, May 24-27, 1899, the sum of 4,000 marks (about $1,000) was donated by two Berlin merchants, lay members of the Congress, as a prize to be offered for the best essay on the subject, "Tuberculosis as a Disease of the Masses and How to Combat It" ("Die Tuberkulose als Volkskrankheit und deren Bekaempfung").

The prize was awarded to Dr. Knopf and this is the successful essay. Those of us who know Dr. Knopf's work will realize that the essay well deserved the prize. At a meeting of the German Central Committee of the International Congress mentioned, it was resolved to publish this essay and arrange for its widest distribution. We are glad to find that Dr. Knopf makes special arrangements for supplying his pamphlet to Boards of Health, Societies, etc., at reasonable rates, for the precious information it contains deserves to be widely disseminated.

A TEXT-BOOK OF DISEASES OF THE NOSE AND THROAT. By D. BRADEN KYLE, M.D. Second Edition. W. B. Saunders & Company, Philadelphia.

THE fact that a second edition of Dr. Kyle's book is called for scarcely more than a year after the issue of the first edition shows how popular this work is. Its popularity seems to be deserved. Treating only of the nose and throat, to which six hundred and twenty pages are devoted, it is very complete. There are 175 illustrations, 23 of them in colors and all of them have a purpose in the book. This second edition differs very slightly from the previous one.

While Dr. Kyle has given due consideration to all the operative procedures in rhinology and laryngology and pharyngology, his book is especially valuable to the general practitioner because of the care with which he goes into details of medical treatment.

There is, perhaps, but one fault that can be found with the book and that is that too many constitutional symptoms and affections of other organs are referred to lesions of the nose and throat, especially the nose. Too many neurotic conditions particularly are attributed to the reflex effect of pathological conditions in mucous membranes. Even this fault, however, is on the right side since the nose and throat specialties have only developed in recent years and the general practitioner is apt to miss the significance of pathological conditions in the upper respiratory tract and their effect on the patient's general condition.

TRANSACTIONS OF THE AMERICAN DERMATOLOGICAL ASSOCIATION. The Twenty-Fourth Annual Meeting, held in Washington, D.C., May 1, 2, and 3, 1900. P. F. Pettibone & Co., Chicago.

THE American Dermatological Association always presents some of the most seriously scientific work of the year. The present volume shows

that there has been no falling off in that respect and it contains some excellent papers. The three articles on malignant diseases of the skin, namely, "The Nature of Malignant Disease of the Skin and Its Transitional Form," by Dr. E. B. Bronson; "The Etiology and Pathology of Malignant Disease of the Skin Affecting the Epithelial Tissue," by Dr. M. B. Hartzell of Philadelphia, and "The Treatment of Malignant Disease of the Skin" by Dr. F. J. Shepherd of Montreal, are all very practical presentations of phases of an important subject. They furnish such excellent material for the general practitioner that it seems almost too bad not to have them appear together in some periodical that has a wider circulation than the transactions of the Association. The recent interest in blastomycetes is reflected by a series of papers on this subject.

PULMONARY CONSUMPTION, PNEUMONIA, AND ALLIED DISEASES OF THE LUNGS; THEIR ETIOLOGY, PATHOLOGY AND TREATMENT WITH A CHAPTER ON PHYSICAL DIAGNOSIS. By THOMAS J. MAYS, A.M., M.D. E. B. Treat & Company, New York.

THIS is a book strange of its kind. It might be called unique, for it certainly deviates from many of the fundamental principles now accepted by the majority of physicians and authorities on tuberculo-therapeutics. Take for example paragraph 1, of what the author is pleased to call the fundamental concepts of the work, where he formulates the following proposition: "That pulmonary phthisis in the large majority of cases is primarily a neurosis, and that the pulmonary disintegration is secondary." We cannot agree with this, for the nervous phenomena in phthisis pulmonalis are, in the majority of cases, not primary but secondary. The degree of nervousness does not depend upon the amount of tuberculous disintegration, for it varies in every individual, no matter at what stage of the disease, and in some it is even absent in the earlier stages.

Proposition 2, "That any agent, influence, or condition which undermines the integrity of the nervous system will engender pulmonary phthisis, or some other form of pulmonary disorder" would also be objected to by the majority of physicians familiar with the disease. There are agencies and conditions which may undermine the integrity of the nervous system and still do not affect the condition of the lungs. Acting, public speaking, singing, gambling at the Stock Exchange, etc., are very apt to affect the nervous system of some individuals seriously, and yet they rarely die of phthisis. In sanitariums for nervous diseases pulmonary diseases are relatively rare and, while we are willing to admit that, on the other hand, tuberculosis is frequent in insane asylums, the cause of this should be sought in the usually very crowded condition of these institutions and the presence of a few consumptives who infect the non-tuberculous ones.

Proposition 3 reads as follows: "That the only remedies of value in the treatment of pulmonary phthisis are those which appeal to, and act through, the nervous system." Now, the most important remedy in pulmonary tuberculosis is fresh air, in other words, aerotherapy, consisting in deep breathing, regular respiratory exercises, rest in the open air, sleeping at night with the window open, walking and exercising in the air, etc. It seems that this remedy acts first through the respiratory system, unless we are mistaken it is now the general opinion that air comes perhaps nearer to being called a specific remedy in pulmonary tuberculosis than anything thus far discovered. Tonics and cod-liver oil, indispensable in many cases of pulmonary tuberculosis, exert their beneficial influence through the digestive system by improving nutrition and assimilation.

Dr. Mays is an enthusiast over the treatment of phthisis by silver-nitrate, and he expresses his opinion in this respect in proposition 4 as follows: "That of special value in the treatment of phthisis is the counter irritant action of silver-nitrate introduced hypodermically over the vagi in the neck." Counterirritants will always be of value in the treatment of phthisis, but whether the hyperdermic injection of silver nitrate over the vagi in the neck is superior to the "points de feu" (igni puncture), a good, strong, old-fashioned mustard plaster, or other counterirritants more easily applied, the future work of Dr. Mays will probably decide.

The last proposition (5) "That acute pneumonia and other forms of acute pulmonary disease are closely affiliated with disorder of the nervous system" also deserves some criticism, for experience has taught that people not infrequently succumb to pneumonia who were really known as what are commonly called "people without nerves."

The portion of the book devoted to physical diagnosis is good. It is, however, to be regretted that in a modern book the chapter on infection should so strongly yield to the idea that consumption is not a communicable disease. We do not ourselves like phthisiophobics, but pulmonary tuberculosis must be considered a highly communicable disease. Dr. Mays quotes men who are well known to be antagonistic to the contagion theory, for example, he says on page 203: "Dr. Aufrecht, after referring somewhat extensively to the contagion theory, says . . . . and less justifiable are the reckless conclusions drawn by Koch concerning the etiological indication of the tubercle bacillus." In quoting Dr. Dettweiler, when the latter writes of the freedom from phthisis of those who are engaged in the care of consumptives in the hospital, he forgets to add that the most scrupulous care is exercised with the sputum of the patients, that each one has his individual pocket spittoon, in short, that everything is done to prevent infection of others or reinfection of the patient. At the Adirondack Cottage Sanitarium, one of our most famous and successful American institutions, infection among the

nurses has never taken place, and the physicians and employees explain this solely by the extreme care taken with the infectious sputum. As a contrast to this we beg to refer Dr. Mays to the statistics of Cornet, Kirchner and Debove, showing the unusually great mortality from tuberculosis among the nurses in general hospitals where all classes of patients, including consumptives, are treated. The quotation of cases where contagion had unmistakably taken place is turned over in this volume to favor the nervous theory.

The book does not contain a word of the efficient work of municipal prophylaxis in European cities and in cities of our own country, such as New York, Philadelphia, and elsewhere, and the subsequent reduction of the number of deaths from tuberculosis, nor mentions that in other countries and cities, where such prophylactic measures do not exist (Austria, Russia, etc.), the mortality from tuberculosis is still on the increase. The now-so-absorbing question of State and municipal sanatoria or special consumptive hospitals for the poor does not receive the slightest mention in Dr. Mays' work.

With all due respect for the earnestness and enthusiasm of Dr. Mays as a teacher, physician and writer, the book before us cannot be considered as one up to date.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY, being a Yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, Collected and Arranged under the General Editorial Charge of GEORGE M. GOULD, M.D. Volume on Medicine. W. B. Saunders & Company, Philadelphia and London.

THIS is the medical part of the American Year Book. As is stated in the preface, the experiment made last year in issuing the work in two volumes has proved very acceptable to subscribers and is continued. Dr. Gould announces that the single change in editorship for the present year is the association of the "scholarly pathologist, Dr. A. O. J. Kelly, with Dr. Riesman in the Section on Pathology." Of the review of special subjects, those of Pediatrics by Dr. Lewis Starr and Dr. Alfred Hand, Jr., of Philadelphia, that of the Diseases of the Skin and Syphilis by Dr. Lewis Duhring and M. B. Hartzell of Philadelphia, and the review of general medicine by Dr. Alfred Stengel and Dr. D. L. Edsall of Philadelphia, are especially interesting.

The discussion of typhoid fever contains a very practical résumé of recent investigations of this important disease. The question of the influence of other micro-organisms in favoring infection with the typhoid bacillus, of the possibilities of infection from shellfish, especially infection from eating cockles, and from hitherto unreported sources, are particularly interesting.

In the review of the literature of gastric ulcer it is clearly to be seen that there is a marked difference in the gastric ulcers that occur in the two sexes. Ulcer occurs five times more frequently in women than in men, but while it causes death in less than two per cent. of the women, there is a fatal termination in 17 per cent. of the cases in men. Ulcer, as a rule, also occurs much later in life in men.

Certain phases of syphilis in recent literature are striking. For instance, the impression is gaining ground that inherited syphilis may prove contagious. Fournier reports certain cases of syphilis that proved absolutely obstinate to specific treatment. Syphilis shows a marked tendency to recrudescence of symptoms in the presence of certain contagious diseases, notably influenza.

The chapters on Materia Medica contain some very practical discussions as to the use of new drugs. Sodium cacodylate, for instance, which has attracted so much attention during the past year is discussed in a way to give a very good idea of its present sphere of employment. Urotropin is quoted as having apparently secured a permanent place in therapeutics. The use of gelatin in various ways as a hemostatic and of formaldehyd in various forms as an internal and external antiseptic are other interesting bits in present-day treatment.

It is impossible satisfactorily to compress a year's medicine within so small a compass, but on the whole the American Year-Book forms a very useful review for the busy practitioner of recent advance in medicine. The index to this volume consists of nearly fifty pages and is an excellent list of cross references to the contents of the book. This is a very praiseworthy feature too often neglected.

THE INTERNATIONAL CLINICS. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Surgery, etc., by Leading Members of the Medical Profession Throughout the World. Edited by HENRY W. CATTELL, M.D., A.M. Volume I., Eleventh Series, 1901. J. B. Lippincott Company, Philadelphia.

OF the three hundred odd pages of the present number of "International Clinics" a little over 100 are devoted to a review of the progress of medicine during the year 1900. This is necessarily crowded and fragmentary, although parts of it are very well done. The first 18 pages of the book are taken up by notes on new remedies. This department is under the care of Dr. Stevens of Philadelphia, whose name is sufficient warrant for the thoroughly practical character of the material to be found in this section.

Among the clinical articles there is an especially good one on gonorrheal rheumatism by Campbell Williams, F.R.C.S. Dr. Williams calls attention to the fact so often missed that the inoculation which produces gonorrheal arthritis

may result from an abrasion of the fossa navicularis caused by the introduction of a sharp-pointed syringe, or from a minute laceration of the urethral mucous membrane due to the passage of instruments.. In two severe cases of urethral arthritis, as Dr. Campbell prefers to call it, he has seen the onset of the disease follow very shortly after acupuncture for preputial edema.

There is an excellent review of the subject of spinal anesthesia by Dr. A. Doleris, accoucheur to the Boucicault Maternity of Paris, as far as this procedure is applicable in obstetrics. He has used it now in twenty-five cases, ten primipara and fifteen multipara. Cocaine anesthesia has according to him, the following advantages: Absolute freedom from pain from the time the lumbar injection is made, increase in the uterine contractions, quicker labor, increase in the power of retraction of the uterus, and great decrease in loss of blood during delivery.

Dr. W. H. Walmsley, Fellow of the Royal Microscopical Society of London, has a very suggestive article on some practical methods in photomicrography. There are articles by Dr. John Deaver, Professor Hallopeau, Professor Delafield, Dr. Solomon Solis-Cohen and Professor Rodman, that are thoroughly practical in character.

A SYSTEM OF PRACTICAL THERAPEUTICS. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital. Second Edition. Revised and Largely Rewritten. Lea Brothers & Co., Philadelphia and New York.

THE Hare's "System" of ten years ago will hardly be recognized in this new edition, so complete are the changes, so extended the dissertation and so complete the redress. The additions alone are sufficient to make a new volume. There are twenty chapters which are here given in general outline: General Therapeutic Considerations by Horatio C. Wood; Prescription Writing by Joseph Remington; General Sanitation by Henry B. Baker; Foods, and the treatment of Obesity and Leanness; General Exercises by E. M. Hartwell; Rest Cure by John K. Mitchell; Electrotherapeutics by A. D. Rockwell; Hydrotherapy by S. Baruch; Climate by S. Edwin Solly; Mineral Waters by James K. Crook; Massage by R. E. Moore; Disinfection by W. M. Coplin; Diseases of the Thyroid and Thymus, Myxedema, Cretinism, Grave's Disease and Obesity by S. J. Meltzer; Chronic Articular Rheumatism, Rheumatoid Arthritis and Gout by James Stewart; Diabetes Mellitus by James Tyson; Diseases of the Blood by Ralph Stockman; Present Treatment of Syphilis by Edward Martin; Treatment of Tuberculosis by Lawrence F. Flick, Scrofulosis by Walter Chrystie and Scurvy by C. E. Banks.

The choice of subjects is wide and the names of the authors are a sufficient guarantee of the character of the mode of treatment. Even a superficial glance through this volume brings into prominence the dominant feature of the work; one that the well-known editor constantly presents, namely, the every-day workability of treatments advocated. Here are no lengthy theoretical dissertations largely padded by quotations from European authors, but concise, practical rules that can be made to fit present-day needs. *What, why* and *how* are the questions with reference to the use of drugs that the authors answer—particularly the *how*.

THE INTERNATIONAL MEDICAL ANNUAL. A Year-Book of Treatment and Practitioner's Index. With a Series of English and American Contributors. 1901, Nineteenth Year. E. B. Treat & Company, New York.

TREAT'S "Annual" is well known and its alphabetical arrangement and concise reviews of practical subjects, give it a place of its own. In the department of therapeutics, a special article has been contributed on toxins and antitoxins by Professor McFarland of Philadelphia and Dr. William Morrell.

The article on tuberculosis in this volume is especially satisfactory. It is written by Professor Charles Ruata of Perugia, Italy, who says: "My aim is to give an answer to the following questions: When a physician discovers a tuberculous infiltration existing in a lung, how long is it since the disease began? How does the specific bacillus reach and spread in the lungs? What is the influence of the specific bacillus on the length of the disease and on death from phthisis? The question of heredity, the question of treatment." The answers to these questions furnish an excellent résumé of the present state of knowledge with regard to tuberculosis.

The article on cancer, by Mr. Keith W. Montserrat, F.R.C.S., is another good discussion of an important subject. In general we can find nothing but praise for this excellent manual, though its brevity necessarily lessens its value in the present large field of medical progress.

BOOKS RECEIVED.

The MEDICAL NEWS *acknowledges the receipt of the following new publications. Reviews of those possessing special interest for the readers of the* MEDICAL NEWS *will shortly appear.*

A TREATISE ON APPENDICITIS. By Dr. GEORGE RYERSON FOWLER. Second Edition. 8vo, 235 pages. Illustrated. J. B. Lippincott Company, Philadelphia and London.

THE TREATMENT OF FRACTURES. By Dr. C. L. SCUDDER. Second Edition. 8vo. 457 pages. Illustrated. W. B. Saunders & Company, Philadelphia and London.

EXPERIMENTAL PSYCHOLOGY. A manual of Laboratory Practice. By E. B. TITCHENER. Vol. I. 8vo, 214 pages. The Macmillan Company, New York.